

State of Washington  
ARTHUR B. LANGLEIE, Governor

UCRSP  
1.2.2-8  
1/1/56

Department of Conservation and Development  
W. A. GALBRAITH, Director

DIVISION OF MINES AND GEOLOGY  
SHELDON L. GLOVER, Supervisor

Bulletin No. 37

# INVENTORY OF WASHINGTON MINERALS

## PART II METALLIC MINERALS

By  
MARSHALL T. HUNTTING

Volume 1 - TEXT  
Volume 2 - MAPS



USEPA SF  
1274628

STATE PRINTING PLANT, OLYMPIA, WASHINGTON  
1956

For sale by Department of Conservation and Development, Olympia, Washington.  
Part II price per set (2 volumes—text and maps) \$4.50.

INVENTORY OF  
WASHINGTON MINERALS

PART II  
METALLIC MINERALS

---

Volume 1 -- TEXT

**iant Silver**

(see Red Cloud)

**illete**

(see Avondale-Dome under lead)

**ladstone (64)**

(see under lead)

**lobe (98)**

**Loc:** Near SE, cor. sec. 31, (39-37E). **Elev:** 2,275 to 2,700 ft. **Access:** 3½ mi. SE. of Orient by road. **Prop:** 1 patented claim. **Owner:** B. B. Hamilton, Orient, Wash. (1941). **Ore:** Copper, gold, silver, zinc. **Ore min:** Pyrite, hematite, galena, chalcopryite, pyrrhotite. **Gangue:** Calcite. **Deposit:** Ore occurs as stringers filling joint planes in argillite and limestone near intact with pyrite-bearing quartz latite. **Dev:** 3 adits, one 900 ft. of workings; 50-ft. shaft. Total of 3,000 ft. **Assays:** Small values in copper and gold reported. **Ref:** 7, p. 78. 30, p. 121-122. 116, no. 5, 1909, p. 61. 164, p. 267.

**old Bar (103)**

(see under gold)

**old Reef (121)**

(see under gold)

**olden Reef**

(see Gold Reef under gold)

**olden Seal**

**Loc:** Cedar Canyon dist. **Ore:** Copper. **Prod:** Amount not known. **Ref:** 97, 1917, p. 507; 1918, p. 511.

**raves (83)**

**Loc:** SW¼SW¼ sec. 35, (39-37E), Orient dist. **Owner:** John and Robert Wagner, Boyds, Wash., leasing to Hugh I. Raves, Boyds, Wash. (1945.) **Ore:** Copper, gold, silver. **Ore min:** Pyrite, chalcopryite, rhodochrosite (?). **Deposit:** Mineralized zone about 4 ft. wide along hanging wall of fault in limestone. **Dev:** Trench. **Assays:** Low gold and silver values. **Ref:** 157.

**ray Eagle**

(see Rightside)

**reat Republic (43)**

**Loc:** Near center N. line sec. 3, (40-32E), on E. side of Deep Cr., Northport dist. **Elev:** 2,200 ft. **Access:** Near Velvet State Highway No. 22. **Prop:** Several unpatented claims. **Owner:** Elmer Godfrey, Northport, Wash. (1941). **Ore:** Copper, silver, gold. **Ore min:** Chalcopryite, pyrrhotite, galena, sphalerite. **Gangue:** Quartz, calcite. **Deposit:** Two main veins, one a quartz vein containing pyrrhotite, the other a quartz-calcite vein up to 4 ft. wide along contact between kersantite dike and gray shale. **Dev:** 400-ft. crosscut, 110-ft. winze, 120-ft. inclined adit. **Assays:** Pyrrhotite vein assayed 11.25% Cu, 12 oz. Ag, .40 Au. The other vein reported to assay 2.5% to 8.5% Cu, .02 oz. Ag, tr. to \$8 Au. **Ref:** 7, pp. 60-61. 30, pp. 113-114. 164, 318.

**artford**

(see Krug)

**ecla (154)**

**Loc:** E½SW¼ sec. 4, (32-41E). **Access:** 3½ mi. NE. of Chewelah by road. **Prop:** 40 acres of ceded land. **Owner:** Tony Mally, Chewelah, Wash. (1941). **Ecla Copper-Silver Mining & Milling Co.** (1915-1920). **International Mining & Metals Co.** (1922). **Ore:** Copper, gold, silver. **Ore min:** Chalcopryite, azurite, malachite, cuprite, chalcocite, micaceous hematite, and some sphalerite, pyrite. **Deposit:** 4-ft. quartz vein in granite. Also smaller veins. **Dev:** 40-ft. crosscut; 100-ft. shaft

and another shaft, both full of water. **Ref:** 30, p. 41. 58, p. 29. 98, 1918-1925. 158. 164, p. 160.

**High Grade (Jay Dee)**

(see Jay Dee under silver)

**High Grade**

(see Turk)

**Highland Chief**

(see under silver)

**Homestake (73)**

(see under gold)

**Hoodoo (208)**

(see under silver)

**Hope and Twin Cabins (70)**

**Loc:** Sec. 18, (39-38E), Northport dist. **Elev:** 3,800 ft. **Prop:** 2 claims. **Ore:** Copper, gold, silver. **Ore min:** Pyrrhotite and some chalcopryite. **Deposit:** Mineralized zone 7 ft. wide in acidic diorite dike rock intrusive into Jumbo volcanics. **Dev:** Two 30-ft. adits about 30 ft. apart, several open cuts and shallow shafts. **Assays:** Reported to av. \$9.20 Au, Cu. **Ag.** **Prod:** 100 tons said to have been shipped. **Ref:** 164, p. 253.

**Hubbard (45)**

(see under lead)

**Hunter**

(see Jackson under zinc)

**Imperial Copper (157)**

**Loc:** Sec. 6, (32-41E), in canyon on W. flank of Old Eagle Mtn., Chewelah dist. **Elev:** 2,800 ft. **Access:** ½ mi. from road. **Prop:** 6 unpatented claims, abandoned in 1941. **Ore:** Copper, silver. **Deposit:** One 4-ft. quartz vein encountered. Workings are in limestone near schist contact. **Dev:** 150-ft. shaft with 450-ft. crosscut at bottom. Also an adit near collar of the shaft. **Assays:** Tr. Cu. **Ref:** 30, p. 40. 58, p. 32. 164, pp. 147-148.

**Independent Keystone (Keystone, Strobeck) (152)**

(part of Chinto holdings, which see)

**Loc:** Near center sec. 32, (33-41E), Chewelah dist. **Access:** Road. **Prop:** 4 patented claims and a fraction. **Owner:** Chewelah Copper Co. leasing from Western Guaranty Co. and A. I. Kulzer, Chewelah, Wash. (1953—). **Independent-Keystone Mining Co.** (1907-1915). **Eagle Mountain Mining Co.** (1949). **Ore:** Copper. **Ore min:** Chalcopryite. **Deposit:** Quartz vein follows bedding planes in argillite and schist. **Dev:** 700-ft. adit. **Ref:** 30, p. 37. 97, 1907, p. 476. 116, no. 1, 1907, p. 17; no. 6, 1908, p. 123. 158. 164, p. 145.

**Indian**

(see Eureka under gold)

**Inklers Point (175)**

**Loc:** SW¼NE¼ sec. 11, (31-40E), on hill above Inklers Point, Chewelah dist. **Elev:** 2,000 ft. **Ore:** Copper. **Ore min:** Chalcopryite. **Gangue:** Dolomite. **Deposit:** A few scattered crystals of chalcopryite occur in dolomite near a fault. **Ref:** 158.

**International (23)**

(see under gold)

**Iron Horse**

(see under gold)

**Iron Horse (32)**

(see under iron)

**Iron Mask (12)**

(see under zinc)

**Iroquois (58)**

(see under zinc)

**Loon Lake Blue Bird (172)**

Loc: SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 33, (31-41E),  $\frac{1}{4}$  mi. E. of Loon Lake Copper workings on Grouse Cr. Elev: 2,550 ft. Access:  $\frac{1}{2}$  mi. N. of the town of Loon Lake. Prop: 4 claims: Bluebird, Wonder, Dupont, Juno. Owner: John P. Orchgar, Loon Lake, Wash. (1941). Loon Lake Blue Bird Copper Co. (1918-1924). Ore: Copper. Ore min: Chalcopryite, bornite, chalcocite, cuprite, malachite, azurite, pyrite. Deposit: 5- to 10-ft. quartz vein in argillite and quartzite. Vein sparsely mineralized. Dev: Shafts 40 and 82 ft. deep, adit 215 ft. long. Workings now caved. Assays: Vein in adit said to assay 3.87% Cu. Prod: Has produced. Ref: 58, p. 40. 98, 1920-1926. 106, no. 12, 1919, p. 5. 112, p. 189. 129, pp. 158-159. 164, p. 217.

**Loon Lake Copper (Kemp-Komar, Key West, Bluebird) (173)**

Loc: Near center sec. 33, (31-41E). Elev: 2,625 ft. Access:  $\frac{1}{2}$  mi. N. of the town of Loon Lake. Prop: 2 claims. Owner: Ernest Laukka and E. L. Tilton, Chewelah, Wash. (1954—). Kemp-Komar Copper Mining Co. (1902-1922). Loon Lake Copper Co. (1918-1929). James Keeth and W. H. West, Spokane, Wash. (1945). Ore: Copper, silver, gold. Ore min: Chalcopryite, bornite, tetrahedrite, malachite, azurite, cuprite, atacamite, hematite, pyrite. Deposit: Quartz vein from 4 to 20 ft. wide in argillite. Known payshoot was 200 ft. long and 500 ft. deep. Dev: 480-ft. shaft from which about 700 ft. of drifts have been driven on 3 levels, 60-ft. shaft, and some drifts. Workings now inaccessible. Assays: Mill feed av. 2% Cu, a few oz. Ag, and a little Au. Highest Au value was \$2.00. Prod: About \$125,000 by 1918. Ref: 30, p. 30. 33, 1907, p. 714. 52, p. 10. 88, p. 8. 97, 1916-1919, 1929. 98, 1918-1925. 106, no. 20, 1918, p. 4; no. 14, 1919, p. 5; no. 22, 1920, p. 4. 112, pp. 153-155. 117, no. 2, 1916, pp. 10-11; no. 7, 1916, p. 4; no. 15, 1916, pp. 6-7; no. 9, 1917, pp. 4-5. 129, pp. 153-158. 130, p. 63. 164, pp. 217-219.

**Lottie (79)**

Loc: Sec. 19, (39-38E), Orient dist. Elev: 3,900 ft. Prop: 1 claim. Ore: Copper, gold, silver. Ore min: Pyrite, pyrrhotite, chalcopryite. Deposit: 8-ft. mineralized zone in rhyolite porphyry intrusive into quartzite and andesite. Dev: 50-ft. shaft and trenches and open cuts for 500 ft. along course of the vein. Assays: 50 tons mined said to av. \$18 Au, Cu, Ag. Prod: About \$900 prior to 1914. Ref: 164, pp. 252-253.

**Lucky Boy (109)**

(see under lead)

**Lucky Boy (Turk)**

(see Turk)

**Lucky Charlie (8)**

Loc: NE $\frac{1}{4}$  sec. 26, (40-36E), Orient dist. Elev: 2,240 ft. Access: Road. Prop: 1 claim, now part of the Hudspeth farm land. Ore: Copper, lead, zinc, silver. Ore min: Galena, sphalerite, chalcopryite. Deposit: 2- to 6-in. vein of quartz in quartzite and schist contains small quantities of ore minerals. Dev: 400-ft. adit, 40-ft. shaft connecting with the adit, and a 30-ft. winze. Ref: 30, p. 119. 164, pp. 291-292.

**Lucky Four (65)**

(see under silver)

**M. and C.**

(see U. S. Copper Gold under silver)

**McKinley (4)**

(see under gold)

**McNally (29)**

(see also Pelkey and Dille, Regina)

Loc: Secs. 33 and 34, (40-37E), Orient dist. Elev: 2,600 to 2,800 ft. Access: Approx. 6 mi. E. of Rockcut by road. Prop: Several claims, including the Pelkey and Dille property. Owner: Bunker Hill & Sullivan Mining & Concentrating Co., San Francisco, Calif. (1937-1951). Ore: Copper, gold, silver, lead. Ore min: Pyrite, chalcopryite, hematite. Gangue: Quartz, epidote, serpentine. Deposit: Replacement of limestone, also an 8-ft. quartz vein. Dev: 330-ft. adit, 250-ft. adit, several short adits, 75-ft. shaft, and several open cuts total about 1,000 ft. Prod: 1938. Ref: 7, pp. 84-85. 30, pp. 124-125. 97, 1939, p. 491. 104, 4/15/37, p. 35. 113, 4/1/37, p. 7. 164, pp. 276-277.

**McNess (36)**

(see under gold)

**Mackinaw**

Loc: 2 mi. E. of Pierre Lk., Orient dist. Owner: Colville Gold Mining Co. (1897). Ore: Copper. Ore min: Chalcopryite. Ref: 63, p. 107.

**Magma (113)**

(see under zinc)

**Majorca (80)**

Loc: Sec. 19, (39-38E), 200 ft. W. of the Minorca claim, Orient dist. Prop: 1 claim. Ore: Copper. Ore min: Pyrite, malachite. Deposit: Limestone cut by basic igneous dikes. Mineralized zone contains a little pyrite and copper stains. Dev: 40-ft. inclined shaft. Ref: 164, p. 254.

**Maple Leaf**

(see Melrose under silver)

**Maryland**

(see Bonanza Copper)

**Mayflower (170)**

(see under lead)

**Melrose (51)**

(see under silver)

**Mexico**

(see Queen under silver)

**Middleport (117)**

(see under zinc)

**Mineral Hill**

(see Aichan Bee under silver)

**Minnehaha (151)**

Loc: Sec. 36, (33-40E), on E. Fk. Chewelah Cr., Chewelah dist. Owner: D. F. Strobeck, Spokane, Wash. (1902). Ore: Copper, gold, silver. Deposit: Mineralized zone 8 to 30 ft. wide. Dev: 40-ft. adit. Assays: Av. assay value is 6% Cu. \$7.50 Au, 6.5 oz. Ag. Ref: 88, p. 7.

**Minorca (81)**

Loc: Sec. 19, (39-38E), on W. branch of Fifteen Mile Cr., Orient dist. Elev: 3,200 ft. Owner: Centennial Mines Co. (1924). Minorca-Homestake Mines Co. (1922). Ore: Copper, gold, silver. Ore min: Pyrite, pyrrhotite, chalcopryite. Gangue: Quartz. Deposit: Vein in limestone and argillite, which are cut by altered basic dikes. Dev: 2 shafts, one of which is 165 ft. deep. Prod: 100 tons prior to 1920. Ref: 98, 1922, p. 1656; 1925, p. 1808. 100, 1903, p. 55. 164, p. 250.

**Mint**

Loc: On Gold Hill near present town of Kettle Falls. Prop: Group of claims. Owner: D. F. Strobeck, Spokane, Wash. (1902). Ore: Copper, gold, silver. Deposit: 3 veins varying in width

**Yellow Jacket**

Loc: Index dist. Ore: Gold. Ref: 58, p. 74.

**Zeta (134)**

Loc: Sec. 34, (29-11E), about 1 mi. E. of Silver Lk. on the Monte Cristo side of the divide. Ore: Gold, silver, copper. Ore min: Pyrite, chalcopryrite, bornite. Deposit: 3 parallel mineralized fractures. One shows from 8 to 24 in. of ore, another shows 3 to 18 in. of ore. Dev: 15-ft. adit, several open cuts. Assays: \$5 to \$8 Au, \$3 to \$11 Ag. Ref: 14, p. 26. 63, p. 27.

**STEVENS COUNTY****A and C (131)**

(see under copper)

**Abe Lincoln (41)**

Loc: Sec. 1, (39-36E), on flat bench 1 mi. E. of Rockcut, Orient dist. Elev: 2,350 ft. Prop: 1 unpatented claim. Owner: Abandoned (1941). Ore: Gold, copper. Ore min: Pyrite, chalcopryrite. Deposit: Mineralized quartz vein occurs in a country rock consisting of Orient gneiss cut by diorite dikes. Dev: 120-ft. shaft with 40-ft. crosscut at 100-ft. level, and another 100-ft. shaft. Assays: \$30 Au. Ref: 30, p. 129. 104, 9/32. 164, pp. 289-290.

**Abe Lincoln (Comstock)**

(see Comstock under lead)

**Acme (F. H. and C.)**

(see F. H. and C.)

**Acme (Acme-Dora) (151)**

(see under lead)

**Admiral (192)**

(see under copper)

**Advance (101)**

(see under zinc)

**Aguila (153)**

(see under lead)

**Al Ki**

(see under lead)

**Aladdin (Blue Ridge, Sierra Zinc)**

(see Sierra Zinc under zinc)

**Aladdin (140)**

(see under lead)

**Alert**

Loc: On N. Fk. Fifteen Mile Cr., Northport dist. Ore: Gold, silver, copper. Ref: 63, p. 107.

**Alice**

(see under copper)

**Alice C (45)**

Loc: Sec. 18, (39-37E), ¼ mi. E. of First Thought property. Access: ¼ mi. from road. Prop: 2 claims: Alice C, Protection. Owner: May be part of holdings of Gold Syndicate Corp. Ore: Gold. Ore min: Pyrite. Deposit: Latite flows cut by monzonite dikes. Fracture zones in these rocks mineralized with auriferous pyrite. Dev: 70-ft. double-compartment shaft and 2 adits. Ref: 30, p. 133. 164, p. 261.

**Alice May**

Loc: On Onion Cr., Northport dist. Ore: Gold. Ref: 63, p. 111.

**Alma (152)**

(see under silver)

**Amazon (174)**

(see under copper)

**American Boy (64)**

Loc: Sec. 31, (39-37E), Orient dist. Prop: 1 unpatented claim. Owner: Abandoned (1941). Ore: Gold, copper. Ore min: Pyrite and small amounts of chalcopryrite. Deposit: Mineralized fracture zone in limestone parallel to the bedding planes. Dev: 25-ft. shaft, several open cuts. Assays: Reportedly \$15 Au. Ref: 30, p. 127. 164, p. 281.

**Anaconda (113)**

(see under lead)

**Antelope (82)**

Loc: Sec. 20, (39-38E), Orient dist. Elev: 3,650 ft. Access: Near road. Prop: 1 unpatented claim. Owner: Abandoned (1941). Ore: Gold, copper. Ore min: Pyrite, pyrrhotite, chalcopryrite, melanterite. Gangue: Quartz. Deposit: 2½- to 4-ft. vein in Jumbo volcanics. Dev: Inclined shaft about 100 ft. deep. Assays: Sample taken across the vein said to assay \$26.25. Prod: 50 tons of ore said to have been mined. Ref: 30, p. 135. 164, p. 251.

**Ark (150)**

(see under silver)

**Audrey M. (63)**

(see under copper)

**B and B (170)**

(see under copper)

**Bald Eagle (32)**

Loc: Sec. 25, (40-36E), E. of Mogul property, Orient dist. Elev: 3,650 ft. Access: Near road. Prop: 3 unpatented claims, including: Bald Eagle Nos. 1 and 2. Owner: Abandoned (1941). Bald Eagle Gold Mining Co. (1897). Ore: Gold, silver, copper. Ore min: Pyrite, chalcopryrite, a few specks of galena. Gangue: Quartz. Deposit: Country rock of quartzite, schist, and limestone cut by diorite dikes, is traversed by two mineralized fracture zones, one 12 ft. wide. Dev: 25-ft. shaft, 15-ft. shaft, and other shafts total about 100 ft. Also a few open cuts. Assays: \$1 to \$6 Au, Ag. Ref: 30, p. 129. 63, p. 106. 164, p. 287.

**Banner**

(see Chinto under copper)

**Beer Mountain (155)**

(see under lead)

**Beecher (37)**

Loc: Near center sec. 31, (40-37E), Orient dist. Elev: 2,500 ft. Access: 2 mi. NE. of Rockcut by road. Owner: Beecher Gold Mining Co. (1909-1924). Ore: Gold, silver, copper, lead. Ore min: Free gold, pyrite, sylvanite, galena, limonite, chalcopryrite. Gangue: Quartz, calcite. Deposit: 2 quartz veins, one 4 to 24 in. wide, another as much as 8 ft. wide. Country rock is schist and Rossland volcanics cut by diabase. Dev: 65-ft. shaft with 115-ft. drift at bottom. Other short drifts. Assays: Av. \$4 to \$24 Au, high-grade \$136 to \$296 Au. Prod: 2 shipments aggregating 22 tons prior to 1913. Ref: 7, p. 88. 97, 1915, p. 575; 1916, p. 616. 98, 1918, 1922, 1925. 114, 8/09, p. 60. 164, p. 285.

**Belcher (176)**

(see under copper)

**Belle of the Mountain**

Loc: Summit dist., about 18 mi. W. of Chewelah. Access: Road from Chewelah. Owner: C. H. Bodge (1890). Ore: Gold. Ore min: Free gold. Deposit: 3-ft. quartz vein. Dev: 20-ft. shaft. Assays: Ore on dump showed \$20 Au. Ref: 12, p. 77. 13, p. 124.

**Belmont (54)**

**Loc:** Near center sec. 18, (39-37E). Joins the First Thought property on the SW. **Prop:** 1 claim. **Owner:** May be part of Gold Syndicate Corp. holdings. **Ore:** Gold. **Ore min:** Pyrite. **Deposit:** 2 intersecting sets of fractures in latite and monzonite porphyry show some mineralization. **Dev:** 30-ft. shaft and some trenching. **Ref:** 30, p. 121. 164, p. 265.

**Benvenue**

(see Gold Reef)

**Bertha M (157)**

(see under lead)

**Big Iron (28)**

(see under iron)

**Big Jim (Sweet Home) (75)**

**Loc:** Sec. 19, (39-38E). **Prop:** 1 fraction. **Ore:** Gold, copper. **Deposit:** Vein cutting dark basic igneous rock. **Dev:** 10-ft. shaft and several open cuts. **Assays:** Said to assay \$4 Au, \$1 Cu. **Ref:** 164, p. 252.

**Big Strike (121)**

**Loc:** Sec. 12, (40-42E), Northport dist. **Access:** 12 mi. by road to railroad at Boundary. **Owner:** Newton Hartman, Colville, Wash. **Ore:** Gold. **Ref:** 158.

**Birton**

**Loc:** Near Sheep Cr., 6 mi. from Northport. **Prop:** 12 claims. **Owner:** Birton Gold Mining & Milling Co. (1897). **Ore:** Gold, copper. **Ore min:** Iron and copper sulfides. **Ref:** 63, p. 106.

**Black Horse**

(see Columbia Tungsten under tungsten)

**Black Witch**

(see Alma under silver)

**Blue Belle**

**Loc:** Summit dist., about 18 mi. W. of Chewelah. Adjoins Belle of the Mountain on S. **Access:** Road from Chewelah. **Owner:** P. Kearney, D. B. Arman, and J. Davis (1890). **Ore:** Gold. **Ore min:** Free gold. **Deposit:** 3-ft. quartz vein. **Dev:** 40-ft. shaft. **Assays:** Hand samples from dump assayed \$20 Au. **Ref:** 12, pp. 77-78. 13, p. 123.

**Blue Bird (85)**

**Loc:** Sec. 19, (39-38E), Orient dist. **Prop:** 1 claim. **Owner:** Centennial Mines Co. (1924-1926). **Minorca-Homestake Mines Co.** (1922). **Ore:** Gold, silver, copper. **Deposit:** Limestone and calcareous argillite cut by basic dikes. **Residual areas of Jumbo volcanics.** 5- to 7-ft. vein cuts the series. **Ref:** 98, 1925, p. 1808; 1926, p. 1573. 164, p. 250.

**Blue Goose (15)**

(see under copper)

**Blue Grass (Katy) (57)**

**Loc:** Near center E½ sec. 24, (39-38E), near top of Toulou Mtn., Orient dist. **Elev:** 3,000 ft. **Access:** 1 mi. from road. **Prop:** 3 unpatented claims. **Owner:** Gus Dahl, Orient, Wash. (1940). **Blue Grass Gold, Silver, Copper Mining Co.** (1909). **Ore:** Gold, silver, copper. **Ore min:** Pyrite, chalcocopyrite. **Gangue:** Quartz. **Deposit:** Conglomerate, shale, tuff, dacite, and andesite cut by monzonite and granite dikes. **Mineralization is in fracture zones near the dikes.** One zone is 3 ft. wide. **Dev:** 40-ft. shaft, 410-ft. crosscut, open cuts. **Assays:** Av. said to be \$1.00 Au, though assays as high as \$16 have been obtained. **Ref:** 30, pp. 123-124. 114, no. 5, 1909, p. 62. 164, pp. 271-272.

**Blue Ridge**

(see Sierra Zinc under zinc)

**Blue Star**

(see Eagle under silver)

**Bluebird**

(see Loon Lake Copper under copper)

**Bonanza Copper (198)**

(see under copper)

**Brooks (201)**

(see under silver)

**Bruce Creek**

(see A and C under copper)

**Bryant (38)**

(see under copper)

**Bucher**

**Loc:** Orient dist. **Ore:** Gold. **Prod:** 1907. **Ref:** 97, 1908, p. 580.

**Buck Mountain**

(see under silver)

**Buffalo (118)**

(see under silver)

**Bullion (97)**

(see under lead)

**Burrus (139)**

(see under zinc)

**Butte (46)**

**Loc:** Secs. 7 and 18, (39-37E), on First Thought Mtn., Orient dist. **Owner:** Treasure Gold Mining Co., Spokane, Wash. **Ore:** Gold, silver. **Ref:** 158.

**Centennial (76)**

(see under copper)

**Charity**

(see F. H. and C.)

**Checops (168)**

(see under copper)

**Chewelah Consolidated (156)**

(see under lead)

**Chewelah Eagle**

(see Eagle under silver)

**Chewelah Standard (183)**

(see under copper)

**Chinto (175)**

(see under copper)

**Churchill (30)**

(see under copper)

**City View (149)**

**Loc:** SW¼ sec. 16, (36-38E). **Elev:** 2,330 ft. **Access:** 1 mi. E. of Kettle Falls (Meyers Falls). **Prop:** Several claims. **Owner:** Abandoned (1941). **Ore:** Gold, lead, silver, copper. **Ore min:** Galena, pyrite. **Deposit:** 5-in. and 3-ft. quartz veins cutting argillite and limestone. **Pyrite occurs in the wall rock.** **Dev:** 60-ft. adit, 50-ft. adit, 12-ft. shaft. **Assays:** Ore said to assay \$9.00 Au and to carry values in Pb and Ag. **Ref:** 30, p. 55. 158. 164, p. 234.

**Clara (110)**

**Loc:** Secs. 10 and 11, (40-41E), Northport dist. **Ore:** gold, silver, copper. **Prod:** Has produced. **Ref:** 58, p. 14. 63, p. 111.

**Coffer (73)**

(see under copper)

**xaminer**

**Loc:** On Mineral Hill in the Flat Cr. area. Northport dist.  
**Prop:** 4 claims. **Owner:** Examiner Mining Co. (1902). **Ore:** old, silver. **Deposit:** 6-ft. vein. **Dev:** 450 ft. of adits and shafts. **Assays:** \$2 to \$16 Au, Ag. **Ref:** 88, pp. 6-7.

**xpress**

(see St. Paul-Express under copper)

**H. and C. (Faith, Hope, and Charity: or Acme) (13)**

**Loc:** Secs. 19 and 30, (40-37E), Orient dist. **Elev:** 2,600 ft. **Access:** 5 mi. NE, of Rockcut by road. **Prop:** 3 patented, 10 unpatented claims. **Owner:** Goldstake Mining Corp. (1941). **H. & C. Gold Mining Co.** (1918-1920). **Acme Consolidated Mines, Inc.** (1930). **Ore:** Gold, silver. **Ore min:** Pyrite. **Deposit:** to 5-ft. quartz vein. **Dev:** 250-ft. shaft with drifts on 4 levels, total 1,500 ft. Large amount of open-cut work. **Assays:** Smelter shipment said to return 2.36 oz. Au, 1.9 oz. Ag. **Prod:** 1 small shipment to Tacoma smelter about 1917, produced 1929. **Ref:** B, 7/21/32, p. 1. 30, p. 118. 97, 1918, p. 510; 1930, p. 676. 98, 20-1925. 104, 6/15/35, p. 27; 2/29/36, p. 28; 12/15/36, p. 27. 2, p. 178. 113, April-May 1934, p. 15. 158. 164, pp. 277-278.

**with**

(see F. H. and C.)

**Other Lode**

**Loc:** Orient dist. **Ore:** Gold. **Prod:** 1933. **Ref:** 97, 1934, p. 7.

**delity (92)**

**Loc:** Sec. 6, (40-40E), Northport dist. **Ore:** Gold, copper. **Ref:** 58, p. 22. 63, p. 106.

**First Thought (47)**

**Loc:** Secs. 7 and 18, (39-37E). **Elev:** 2,900 ft. **Access:** 3 mi. of railroad at Orient, on First Thought Mtn. Lookout road. **Prop:** 17 patented, 11 unpatented claims. **Owner:** Gold Syndicate Corp., Spokane, Wash. (1949—). **First Thought Gold Mines Co., Ltd.** (1905-1934). **First Thought Mining Corp.** (1937-44). **Ore:** Gold, silver. **Ore min:** Pyrite, free gold. **Gangue:** quartz, calcite. **Deposit:** Mineralized zone 15 to 110 ft. wide rhyolite porphyry and quartz latite. Richer ores in the zone near intersections of faults. **Dev:** 1½ mi. of workings on levels. **Assays:** 40,000 tons of ore av. ¾ oz. Au, ½ oz. Ag. **Prod:** \$1,350,000 in gold prior to 1948. Produced 1904, 1906-09, 1934-1942. **Ref:** 7, pp. 71-76. 30, pp. 117-118. 39, 68, 9, 97, 1905, 1907-1910, 1931, 1935, 1937-1941. 98, 1918-1926. 11/27/34. 104, 6/15/32, p. 27; 7/15/34, p. 26. 106, 5/5/32, p. 178. 113, 2/18/37, p. 8. 129, p. 164. 130, p. 67. 141, 22. 158. 164, pp. 258-260.

**First Thought Extension (49)**

**Loc:** Sec. 18, (39-37E), SE. of the First Thought property, Orient dist. **Access:** Near road. **Prop:** Several claims. **Owner:** may be part of holdings of the Gold Syndicate Corp. **Ore:** old. **Ore min:** Pyrite. **Deposit:** Latite flows cut by monzonite dikes. Numerous fault zones in both formations are mineralized. **Dev:** pyrite said to carry gold. **Dev:** 650 ft. of work in main adit. **Assays:** Said to assay up to \$400 Au. **Ref:** 30, p. 135. 114, 5, 1909, p. 59. 164, p. 261.

**asure (34)**

**Loc:** Sec. 30, (40-37E), Orient dist. **Owner:** Martin Woldsen, Spokane, Wash. **Ore:** Gold, silver. **Ref:** 158.

**innigan**

(see Iroquois under zinc)

**sco Standard (119)**

(see under silver)

**Galena Farm (132)**

(see under lead)

**Galena Ridge**

(see Galena Farm under lead)

**Gem (58)**

**Loc:** Sec. 19, (39-37E), on N. slope of First Thought Mtn., 6 mi. NE. of Orient. **Elev:** 3,440 ft. **Access:** Road. **Prop:** 4 unpatented claims. **Owner:** Paul Anderson, Coiville, Wash. (1941). **Ore:** Gold. **Ore min:** Auriferous pyrite. **Gangue:** Quartz. **Deposit:** Lavas and interbedded sediments cut by monzonite and fine-grained granite dikes. Ore occurs in a 4-ft. fracture zone in one of the granite dikes. **Dev:** 250-ft. adit, 105-ft. shaft, and 4 drifts from 12 to 60 ft. long. **Assays:** Some selected samples assayed \$1,000 Au. Ore said to av. \$40 per ton. **Prod:** 1939. **Ref:** 30, p. 123. 97, 1940, p. 480. 106, 7/21/32, p. 1. 158. 164, p. 271.

**Georgic (70)**

(see under copper)

**Germania (202)**

(see under tungsten)

**Giant Silver**

(see Red Cloud under copper)

**Globe (66)**

(see under copper)

**Gold Bar (127)**

**Loc:** Secs. 15 and 22, (37-38E). **Elev:** 1,600 to 2,100 ft. **Access:** 1,000 ft. E. of State Highway 22 by road. 1½ mi. to railroad at Evans. **Prop:** 120 acres of deeded land in 8 patented claims: Mayflower Nos. 1 to 6 and Contact Nos. 1 and 2. **Owner:** Gold Bar Mining Co., Bossburg, Wash. (1948-1950). **Ore:** Gold, silver, copper, lead, zinc. **Ore min:** Pyrite, tetrahedrite, sphalerite. **Deposit:** Quartz veins from ½ in. to 8 in. wide filling fractures in quartzite and argillite. Veins sparsely mineralized. Small tonnage of ore exposed. **Dev:** About 1,000 ft. of workings in 4 adits and 2 inclines. **Assays:** 7 assays show from 0.005 to 0.15 oz. Au, 1.2 to 62.0 oz. Ag, tr. to 1.3% Pb, tr. to 1.7% Zn, tr. to 0.3% Cu, 1.02% to 2.70% As. **Prod:** 400-lb. test shipment to Bunker Hill smelter prior to 1945. **Ref:** 30, pp. 80-81. 69, p. 8. 158.

**Gold Fisher and White Bear**

**Loc:** Orient dist. **Ore:** Gold. **Prod:** 1933, 1934. **Ref:** 97, 1934, p. 297; 1935, p. 355.

**Gold Hill (Colonel Fish)**

**Loc:** 1 mi. E. of Kettle Falls. **Owner:** G. L. Duckworth (1942). **Ore:** Gold with some silver and lead. **Dev:** 300-ft. shaft with a 600-ft. drift on the 150-ft. level and a 300-ft. drift on the 300-ft. level. Also a 600-ft. adit near the shaft. **Ref:** 158.

**Gold Ledge (143)**

**Loc:** SW¼ sec. 4, (36-38E), Kettle Falls dist. **Access:** Near road. **Prop:** 460 acres of deeded land. **Owner:** Franklin Good (1941). **Sliver Queen Mining Co.** (1934-1935). **Ore:** Gold, silver. **Deposit:** Quartz vein along contact of argillite and porphyry. **Dev:** 150-ft. inclined shaft, large open cut. **Assays:** 6 tons shipped netted \$40 per ton Au, Ag. **Prod:** 6 tons in 1934. **Ref:** 30, p. 56. 97, 1935, p. 355. 99, 1/8/35. 104, 12/15/34, p. 22. 113, April-May 1934, p. 5.

**Gold Reef (Benvenue, Golden Reef) (145)**

**Loc:** SW¼SE¼ sec. 9, (36-38E), on top of hill, Kettle Falls dist. **Elev:** 3,100 ft. **Access:** Road. **Prop:** 4 unpatented claims. **Owner:** William Setzer and Ross Morehead, Coiville, Wash. (1949). **Bunker Hill & Sullivan Mining & Concentrating Co.**

(1932). M. I. Stelman and G. F. Grundy (1938). Ore: Gold, silver, copper. Deposit: Quartz vein said to av. 2 to 3 ft. wide and to be traceable for 800 ft. Vein is along contact between argillite and an acidic dike. Dev: 750 ft. of adits and 165 ft. of shafts and inclines. Improv: Small homemade mill. Assays: 24 tons shipped to smelter assayed 0.542 oz. Au, 0.834 oz. Ag. Prod: \$100,000 reported prior to 1935. 1939 (24 tons). 2 or 3 carloads in 1946 and 1947. Ref: 30, p. 55. 68, p. 9. 97, 1910-1912, 1915. 104, 3/15/32, p. 27; 8/30/32, p. 28. 106, 4/7/32, p. 10. 158. 164, pp. 231-232.

#### Gold Stake (14)

Loc: Secs. 19 and 30, (40-37E), between First Thought Mtn. and Summit Mtn. on upper Sand Cr., Orient dist. Owner: Goldstake Mining Corp., Orient, Wash. Ore: Gold. Prod: 1939. Ref: 97, 1940. 158.

#### Gold Wreath

Loc: T. 36 N., R. 38 E., Kettle Falls dist. Ore: Gold. Prod: 1931. Ref: 97, 1931, p. 478.

#### Golden Hope

(see Sunday)

#### Golden Reef

(see Gold Reef)

#### Graves (69)

(see under copper)

#### Gray Eagle

(see Rightside under copper)

#### Great Republic (91)

(see under copper)

#### H. R. H. (122)

Loc: Sec. 12, (40-42E), Northport dist. Access: 12 mi. by road to railroad at Boundary. Owner: Newton Hartman. Ore: Gold. Ref: 158.

#### Ham (162)

(see under lead)

#### Harper

(see Pritchard and Harper)

#### Hartford

(see Krug under copper)

#### Hecla (179)

(see under copper)

#### Hi Cliff

(see Uncle Sam under lead)

#### Hidden Treasure (48)

Loc: Sec. 18, (39-37E), S. of the Belmont claim. Access: Near road. Prop: 1 unpatented claim. Owner: Abandoned (1941). Ore: Gold. Ore min: Pyrite. Gangue: Quartz. Deposit: Pyrite and irregular stringers of quartz occur in a fracture zone in latite near an intrusive monzonite dike. Dev: 35-ft. shaft, 60-ft. tunnel, open cuts. Prod: 1934. Ref: 30, pp. 122-123. 97, 1935, p. 355. 164, pp. 264-265.

#### High Grade

(see Turk under copper)

#### Highland (115)

(see under lead)

#### Homestake (77)

Loc: Sec. 19, (39-38E). Elev: 3,800 ft. Access: Near road. Prop: Several unpatented claims. Owner: Julius Weston, Northport, Wash. (1941). Minorca-Homestake Mines Co. (1922). Centennial Mines Co. (1924-1926). Ore: Gold, copper, silver,

lead. Ore min: Chalcopyrite, pyrite, pyrrhotite. Gangue: Quartz. Deposit: 4½-ft. vein in Jumbo volcanics. Dev: 2 shafts 27 and 12 ft. deep. Trenching for 100 ft. along the vein. Assays: Said to assay \$17.00 Au, \$8.60 Cu, \$3.15 Ag. At one place the vein is reported to show 4½ ft. of \$31 ore. Prod: 100 tons of ore shipped. Ref: 30, p. 136. 98, 1925, p. 1808; 1926, p. 1573. 164, pp. 251-252.

#### Honest John (196)

(see under silver)

#### Hope

(see F. H. and C.)

#### Hope and Twin Cabins (86)

(see under copper)

#### Hubbard (96)

(see under lead)

#### Indian

(see Eureka)

#### Intérnational (40)

Loc: Sec. 6, (39-37E), on N. end of First Thought Mtn., Orient dist. Elev: 3,540 to 3,640 ft. Access: 2 mi. E. of Rockcut, near road. Prop: Several unpatented claims. Owner: Abandoned (1941). Ore: Gold, silver, copper. Deposit: Latite lavas and interbedded Tertiary shales cut by dikes of monzonite and granite. Work has been concentrated along the contact of the dikes with latite and shale. Dev: 2 shafts, one 125 ft. deep, and an adit about 1,000 ft. long. Assays: Tr. to \$27 Au, Ag reported. Ref: 30, p. 133. 164, pp. 261-262.

#### Interstate

Loc: Orient dist. Owner: Vulcan Mining Co. (1915-1924). Ore: Gold, silver. Ref: 97, 1915, p. 575. 112, 1918-1926.

#### Iron Cap

(see Ham under lead)

#### Iron Horse

Loc: On Deep Cr., Northport dist. Ore: Gold, silver, copper. Ref: 63, p. 111.

#### Iron Horse (20)

(see under iron)

#### Iron Mask (10)

(see under zinc)

#### Iroquois (114)

(see under zinc)

#### Jay Gould (181)

(see under silver)

#### Jayhawker (24)

(see under copper)

#### John Hays (159)

(see under silver)

#### Juno-Echo (184)

(see under copper)

#### Katy

(see Blue Grass)

#### Kemp Komar

(see Loon Lake under copper)

#### Keough (120)

(see under lead)

#### Kettle River

(see White Elephant)



**Montgomery (Platsburg)**  
(see Platsburg under copper)

**Moonlite**  
(see Morning under silver)

**Moore (106)**

**Loc:** Sec. 25, (40-39E), Northport dist. **Access:** Road. **Prop:** Patented ranch land. **Owner:** John Moore, Northport, Wash. (1941). **Ore:** Gold, silver, copper. **Deposit:** Small fracture zone impregnated with mineralized quartz. **Dev:** 225-ft. adit with a 60-ft. crosscut. **Ref:** 30, p. 106.

**Moraski (111)**  
(see under copper)

**Morning (137)**  
(see under silver)

**Morning Star**

**Loc:** Orient dist. **Owner:** American-Scotia Mining Co. (1918). **Ore:** Gold, silver, copper. **Ref:** 112, p. 165.

**Mount Olive (51)**

**Loc:** Sec. 18, (39-37E), Orient dist. **Owner:** Valley Dew M. & M. Co. (1908). **Ore:** Gold. **Ref:** 116, no. 4, 1908, p. 91.

**Mountain View (103)**  
(see under silver)

**Mountain View Extension (104)**  
(see under silver)

**Mullen (187)**  
(see under lead)

**Mullen Iron (126)**  
(see under iron)

**Myeerah (117)**  
(see under lead)

**Myrtle**  
(see under lead)

**Mystery (19)**  
(see under copper)

**Nabob (180)**  
(see under copper)

**Napoleon (125)**  
(see under iron)

**Nellie S.**  
(see Chewelah Standard under copper)

**Nest Egg (61)**

**Loc:** Sec. 30, (39-37E), 15 mi. from Bossburg, Northport dist. **Access:** Road. **Ore:** Gold, silver, copper. **Ref:** 58, p. 48. 63, p. 108.

**Newport (Eagle-Newport)**  
(see Aguila under lead)

**Noble Four**  
(see under copper)

**North Star (55)**

**Loc:** SE¼ sec. 18, (39-37E). **Elev:** 2,400 ft. **Access:** 3 mi. E. of Orient by road. **Prop:** Several claims. **Owner:** Abandoned (1941). Valley Dew M. & M. Co. (1908). North Star Mining Co. (1908-1909). **Ore:** Gold. **Ore min:** Pyrite. **Gangue:** Calcite, quartz, gouge. **Deposit:** Mineralized shear zone about 6 ft. wide in quartz latite. **Dev:** 580-ft. drift and 70-ft. crosscut, also a shaft which intersects the drift. **Assays:** \$1.50 in Au reported. **Ref:** 7, p. 77. 30, p. 121. 114, no. 5, 1909, p. 60. 116, no. 4, 1908, p. 91. 164, p. 265.

**Northport (99)**

**Loc:** SW¼ sec. 16, (39-40E), on N. side of Fish Cr. **Elev:** 2,230 ft. **Access:** 3 mi. SE. of Northport by road. **Ore:** Gold. **Ore min:** Limonite. **Deposit:** Brecciated zone of limonitic replacement in limestone 3 ft. wide. **Dev:** 65-ft. shaft, 93-ft. crosscut. **Assays:** Reportedly \$12 Au at bottom of the shaft. **Ref:** 164, pp. 316-317.

**O-Lo-Lim (204)**  
(see under copper)

**O'Neal-Schenk**  
(see Rightside under copper)

**Ora**  
(see under copper)

**Orazada (203)**  
(see under silver)

**Orient, Crescent, and Deadwood (63A)**  
(see under copper)

**Orient Eureka**  
(see Eureka)

**Oropacum (43)**

**Loc:** Sec. 7, (39-37E), just N. of the First Thought mine, Orient dist. **Elev:** 3,250 ft. **Access:** Near road. **Prop:** 1 unpatented claim. **Owner:** May be part of Gold Syndicate Corp. holdings (1951). **Ore:** Gold. **Ore min:** Pyrite. **Deposit:** Fracture zones in quartz latite have been impregnated with quartz and pyrite. **Dev:** 2 shafts connected by a drift total about 50 ft. of work. **Assays:** Mineralized zone said to give a general assay of \$3 Au. Picked samples said to run as high as \$47 Au. **Ref:** 30, p. 134. 164, p. 264.

**Orpha (80)**  
(see under copper)

**Pacific Copper (167)**  
(see under copper)

**Pay Streak (88)**

**Loc:** Sec. 2, (40-38E), Orient dist. **Access:** Near road. **Prop:** 1 unpatented claim. **Owner:** Abandoned (1941). **Ore:** Gold. **Deposit:** Quartz vein about 1 ft. wide. **Dev:** Open cuts. **Ref:** 30, p. 136.

**Paymaster**  
(see under copper)

**Payne (185)**  
(see under copper)

**Pedivar**  
(see under silver)

**Pedro (84)**

**Loc:** Sec. 20, (39-38E), E. of Antelope mine, Orient dist. **Elev:** 3,600 ft. **Prop:** 1 claim. **Ore:** Gold, silver, copper. **Ore min:** Pyrite and small amount of chalcopyrite. **Deposit:** Small outcrop of a vein in Jumbo volcanics. **Dev:** 8-ft. shaft. **Assays:** Said to assay \$8.20 Au, Ag, Cu. **Ref:** 164, p. 251.

**Pelkey and Dille (22)**  
(see under copper)

**Pennant (52)**

**Loc:** Sec. 18, (39-37E), Orient dist. **Owner:** Valley Dew M. & M. Co. (1908). **Ore:** Gold. **Ref:** 116, no. 4, 1908, p. 91.

**Perry (2)**  
(see under lead)

**Platsburg (165)**  
(see under copper)

**McGowan Placer (5)**

Loc: SW  $\frac{1}{4}$  sec. 22, (9-10W), on N. bank of Columbia R. Elev: 6.4 to 11.7 ft. Access: Adjacent to U. S. Highway 101 about 2  $\frac{1}{2}$  mi. E. of Chinook. Owner: C. A. McGowan (1947). Ore: Iron, titanium, zirconium. Ore min: Magnetite, ilmenite, zircon. Gangue: Quartz, garnet, feldspar, mica. Deposit: Magnetite sand 1.5 to 8 ft. thick (av. 4.5 ft.) extends over an area 2,400 ft. long and 400 ft. wide. Dev: Drilling by U. S. Bur. Mines (1944). Assays: 25 drill holes show 21.12% to 43.46% Fe, 3.04% to 14.01% TiO<sub>2</sub>. A high-grade sample showed 53% magnetite, 18% ilmenite, 1% zircon. Prod: None. Ref: 48, pp. 14-15. 80. 179, pp. 44-47.

**Sand Island Placer (4)**

(see under gold, placer)

**PEND OREILLE COUNTY****Berkin**

(see Wolf Creek under lead)

**Buzzell**

(see Lucky Strike under zinc)

**Davenport-Troyer**

(see Gem)

**Gem (Davenport-Troyer) (5)**

Loc: Sec. 21, (39-43E), Metaline dist. Access: Road. Prop: 6 unpatented claims. Owner: Messrs. Troyer and Davenport, Metaline, Wash. (1941). Ore: Iron, lead. Ore min: Hematite. Deposit: Replacement of silicified limestone. Dev: 450 ft. of adits and raises. Prod: 800 tons of iron ore prior to 1941. Ref: 29, p. 43. 58, p. 18.

**Lead Metal (2)**

Loc: Secs. 11 and 14, (40-44E), Metaline dist. Access: Road. Prop: 13 unpatented claims. Owner: Phil LaSota, Metaline Falls, Wash. (1941). Ore: Iron, lead, zinc. Deposit: A replacement deposit of iron with some lead and zinc has been exposed in several open cuts for a length of 800 ft. and width of 4 ft. Dev: 15-ft. shaft, numerous open cuts and trenches. Ref: 29, p. 61.

**Lehigh (7)**

Loc: One pit in center E  $\frac{1}{2}$  sec. 30, (39-43E), and the other near NE. cor. same section. Elev: 3,200, and 2,900 ft. respectively. Access: Road. Owner: Lehigh Portland Cement Co. (1937). Ore: Iron. Ore min: Limonite. Deposit: Oxidized pyrite bodies. Dev: Pits. Prod: 1936, 1937. Ref: 128, p. 78.

**Lucky Strike (3)**

(see under zinc)

**Red Crown (4)**

(see under lead)

**Reynolds Creek (9)**

(see under copper)

**Saddle (1)**

(see under zinc)

**Troyer**

(see Gem)

**Washington (6)**

(see under lead)

**Washington Rock**

(see Washington under lead)

**Wolf Creek (8)**

(see under lead)

**SKAGIT COUNTY****Eagle (1)**

Loc: Hamilton area. Ore: Iron. Ore min: Hematite. Assays: 58.00% Fe, 4.13% Mn, 7.00% SiO<sub>2</sub>. Ref: 13, pp. 45, 48.

**Fairhaven (2)**

Loc: Hamilton area. Ore: Iron. Ore min: Magnetite, hematite. Deposit: Ore minerals occur as a band in glaucophane schist. Ref: 142, p. 99.

**Hamilton (Iron Mountain) (3)**

Loc: Secs. 23 and 24, (35-6E) and sec. 30, (35-7E). Also eastward in secs. 20 and 21, (35-7E). Elev: 100 to 900 ft. Access: Road and logging railroad. Prop: At least 20 claims, among them the Hamilton, Mayflower, Blue Jay, Last Chance, Fairhaven, Washington, Inaugural, Scottish Chief, Manhattan, Helena, Treadwell, Legal Tender, Parnell, and Keystone. Owner: Dewey Smith and Fred Russell (1943). Ore: Iron, manganese. Ore min: Hematite, magnetite. Gangue: Glaucophane-garnet schist. Deposit: Discontinuous beds or lenses in fine-grained glaucophane-garnet schist of pre-Chuckanut age. Five more or less parallel beds are known in the 6 mi. between Hamilton and Birdview. Beds from a few ft. to 30 ft. in thickness. Known tonnage 20,000. Dev: Old openings now inaccessible. Considerable trenching by the W. P. A. in 1939. Assays: Av. composition from 15 analyses: 37.79% Fe, 24.73% SiO<sub>2</sub>, 6.01% Al<sub>2</sub>O<sub>3</sub>, 6.56% CaCO<sub>3</sub>, 9.75% Mn<sub>2</sub>O<sub>3</sub>, 0.49% P, 0.16% S. Prod: About 5,000 tons mined. Ref: 13, p. 41. 48, p. 15. 63, pp. 18-21. 72, p. 32. 111, p. 7. 130, p. 70. 140, pp. 6, 9, 16, 19-25. 141, pp. 66-67. 142, pp. 95-102. 158. 167, pp. 27-29. 177. 178. 179, pp. 27-36.

**Iron Mountain**

(see Hamilton)

**Katie (4)**

Loc: Hamilton area. Ore: Iron. Ore min: Hematite. Assays: 62.00% Fe, 3.00% Mn, 6.50% SiO<sub>2</sub>, tr. S, tr. P. Ref: 13, pp. 42, 45.

**Last Chance (5)**

Loc: Secs. 23 and 24, (35-6E), Hamilton area. Ore: Iron. Ore min: Hematite, magnetite. Gangue: Quartz, glaucophane, garnet. Deposit: 10-ft. bed. Assays: 60.00% Fe, 7.03% SiO<sub>2</sub>, 0.04% S, tr. P. Ref: 13, p. 41. 142, p. 99.

**Mabel (6)**

Loc: Hamilton area. Ore: Iron. Deposit: 14-ft. bed traceable on the surface for 2,000 ft. Ref: 13, p. 41.

**Mayflower (7)**

Loc: Secs. 23 and 24, (35-6E). Ore: Iron. Ref: 142, pp. 96-99.

**O'Toole (8)**

Loc: Hamilton area. Ore: Iron. Ore min: Hematite, magnetite. Deposit: Bodies of ore 15 to 60 ft. thick reported. Assays: Av. of 7 analyses: 54.45% Fe, 9.77% SiO<sub>2</sub>, 0.155% S, 0.0557% P. Ref: 13, pp. 41, 44.

**Pittsburg (9)**

Loc: Hamilton area. Ore: Iron. Ore min: Hematite. Gangue: Quartz. Assays: 29.11% to 32.92% Fe, 28.05% to 32.46% SiO<sub>2</sub>, 0.20% to 0.31% P, 8.43% to 8.56% Al, 8.11% to 13.11% Mn, 6.71% to 8.06% Ca. Ref: 140, p. 24.

**Puget (10)**

Loc: Hamilton area. Prop: 6 claims. Owner: Seattle Manganese Iron Co. (1892). Ore: Iron. Ore min: Hematite. Assays: Av. of 6 analyses: 52.33% Fe, 11.38% SiO<sub>2</sub>, tr. S. Ref: 13, p. 41.

**Iron Duke, Duke's Daughter, Duchess.** Owner: E. J. Grannis, Duluth, Minn. (1941-1949). Ore: Iron. Ore min: Hematite. Deposit: Lens of sedimentary hematite 300 to 400 ft. long and up to 10 ft. thick enclosed in argillite which is a red-bed that can be traced for several miles. Dev: 75-ft. shaft, open cuts. Assays: Owner reports a specimen showed 62.03% Fe, 0.014% P, 0.019% S. Ref: 30, p. 70. 157.

#### Iron Horse (2)

Loc: Near SW. cor. sec. 28, (40-37E), Orient dist. Access: About 300 ft. by trail N. of the Pierre Cr. road from a place ½ mi. E. of the Pierre Lk.-Gilbert Lk. road junction. Ore: Iron, copper, gold. Ore min: Magnetite, pyrrhotite, pyrite, chalcopyrite. Deposit: Ore minerals occur as narrow stringers and pods in limestone. Several hundred tons of ore on the dump. Dip needle showed no deflection, indicating small deposit. Dev: Open cut, shaft reportedly 75 ft. deep. Improv: Cabin (1940). Ref: 116, no. 3, 1909, p. 64. 158.

#### Iron Jack

(see Hill)

#### Iron Tunnel

(see Thompson)

#### Keystone (McDonald) (12)

Loc: Secs. 17 and 20, (39-42E), 4 mi. E. of Leadpoint. Access: 14 mi. by road from railroad at Boundary. Prop: 5 unpatented claims. Owner: C. R. McDonald, Northport, Wash. (1941). Ore: Iron, lead, silver. Ore min: Limonite, galena, hematite. Deposit: Said to be ore chimneys similar to those at the Electric Point mine, in which is galena carrying small values in silver. Dev: 650 ft. of workings mostly in small shafts and open cuts. Improv: Cabin (1941). Assays: Lead ore shipped said to have run 72% to 80% Pb, 2 oz. Ag. Iron ore av. 57% Fe. Prod: A few tons of high-grade lead ore prior to 1941. Iron ore shipped for use in portland cement 1936-1940. Ref: 30, p. 103. 97, 1937-1941. 158.

#### Kulzer (Capital, Vigilant) (21)

Loc: Secs. 20 and 21, (31-41E), Chewelah dist. Elev: 2,200 ft. Access: 6 mi. by road from railroad at Valley. Prop: 4 claims: Vigilant, Capital, Climax, Ninety-eight. Owner: Leased by Three Peaks Mining Co., Salt Lake City, Utah (1951-1952). Mike Kulzer, Valley, Wash. (1910-1949). Ore: Iron. Ore min: Limonite, hematite. Gangue: Dolomitic limestone. Deposit: Irregular limonite-hematite bodies in limestone at its contact with granite. Ore zone from a few to 30 ft. wide and traceable for 500 ft. Ore also occurs at contact of limestone with overlying basalt. Dev: 15 adits, open cuts, and pits. Assays: Ore shows on analysis: 53.56% Fe, 8.45% SiO<sub>2</sub>, 0.14% P, 0.004% S. Prod: About 7,000 tons produced prior to 1914 was used at Tacoma smelter as flux. Small production in 1921. Total of 12,000 tons reported. Ref: 12, p. 80. 13, p. 125. 30, p. 46. 48, pp. 17-18. 71, p. 71. 111, p. 7. 112, p. 156. 130, p. 71. 140, pp. 38-39. 141, p. 142. 142, pp. 37-40. 157. 158. 164, pp. 186-187. 167, pp. 31-32.

#### Lenna's Luck (Lenore's Luck) (17)

Loc: Near center sec. 30, (35-38E), about 300 ft. down the SW. slope of the ridge. Prop: 4 unpatented claims. Owner: Mrs. Lenore Marty, Kettle Falls, Wash. (1941). Ore: Iron. Ore min: Earthy and specular hematite. Deposit: 2 beds of iron ore in quartzite have a max. thickness of 6 in. and are separated by 6 in. of quartzite. Noncommercial quantity of ore exposed. Dev: 5-ft. pit. Assays: High-grade ore. Ref: 30, p. 59. 158.

#### Lenore's Luck

(see Lenna's Luck)

#### Loon Lake (22)

Loc: SE¼ sec. 28, (31-41E), on S. slope of mountain N. of Loon Lake Copper mine. Access: Truck road within 300 ft. of workings. Ore: Iron. Ore min: Hematite, limonite. Deposit: A quartz vein 6 ft. wide in argillite and quartzite contains seams of hematite and limonite as much as 5 in. wide. Noncommercial deposit. Dev: Several open cuts. Assays: Iron constitutes less than 10% of the vein. Ref: 158.

#### Lucile (7)

Loc: Sec. 19, (40-39E), Northport dist. Access: 1 mi. from road. Prop: 1 unpatented claim. Owner: Ben Hofer and associates, Northport, Wash. (1941). Ore: Iron. Ore min: Hematite (?). Deposit: Said to be "dike" of hematite about 6 ft. in av. width. Dev: 8-ft. shaft (caved 1941). Ref: 30, pp. 104-105.

#### McDonald

(see Keystone)

#### McKale (20)

Loc: NW¼ sec. 19, (32-40E), on W. side of Buck Canyon, Chewelah dist. Elev: 2,550 ft. Access: Road. Prop: 80 acres of deeded land. Owner: Messrs. Kulzer and Woodbury, Valley, Wash. Ore: Iron. Ore min: Hematite. Gangue: Quartz. Deposit: Quartzite, and siliceous limestone in which is said to be a 2-ft. vein of hematite. Dev: Adit caved 40 ft. from portal. Ref: 30, p. 45. 164, p. 187.

#### Mally (26)

Loc: W½ sec. 11, (31-38E), SW. of the 5,814-ft. peak in the Huckleberry Mtns. Elev: 4,400 ft. Access: 1 mi. by trail from end of old logging road just N. of the summit on the Cedonia-Blue Cr. road. Owner: Joe Mally (1944). Ore: Iron, reportedly chromium. Ore min: Hematite, martite, magnetite. Gangue: Quartzite. Deposit: A bed of hematite-rich argillite or quartzite interbedded with quartzite. Bed has a max. thickness of 20 ft. and is exposed discontinuously for a distance of a mile. Dev: 20-ft. trench. Assays: Sample from the 20-ft. trench reportedly assayed 35% Fe, 1% Cr. Ref: 158.

#### Marcus

(see under gold, placer)

#### Mullen Iron (6)

Loc: Sec. 12, (37-37E). Access: Near road. Prop: 40 acres of deeded land. Owner: Mr. Mullen, Chewelah, Wash. (1941). Ore: Iron, gold. Ore min: Pyrrhotite. Dev: Caved adits. Assays: Said to carry small values in gold. Ref: 30, p. 78.

#### Napoleon (5)

Loc: NW¼ sec. 3, (37-37E), Orient dist. Elev: 2,350 to 2,600 ft. Access: 2 mi. by road from railroad at Boyds. Prop: 2 patented claims. Owner: Ideal Cement Co., Spokane, Wash. (1955—). P. Burns & Co. (1904-1905). British Columbia Copper Co. (1905-1916). Spokane Portland Cement Co., Spokane, Wash. (1943-1954). Ore: Iron, copper, gold. Ore min: Pyrrhotite, pyrite, magnetite, chalcopyrite, limonite, a little hematite. Gangue: Amphibole, garnet, calcite. Deposit: Amphibolite intruded by monzonite porphyry is host of the ore minerals. Contact deposit developed to width of 300 ft., length of 700 ft., and depth of 250 ft. Ore in lower workings is primary sulfides and at upper workings is mostly iron oxide. Dev: 1,230 ft. of surface work, 1,100 ft. of underground work, diamond drilling. Production is from open pit (1952). Assays: Run-of-mine ore said to contain approx. 33% Fe, 12% S, 10% CaO, 30% SiO<sub>2</sub>, 0.3% Cu, 0.05 to 0.1 oz. Au, tr. Ag. Prod: 1907-1910, 1913-1917, 1938-1955. Ref: 7, pp. 89-91. 30, pp. 85-86. 33, 1907, pp. 391-392; 1908, p. 413. 48, p. 20. 97, 1907-1910, 1913-1917, 1938-1940. 104, 8/30/32, p. 29. 114, no. 5, 1909, pp.

60-61. 116. no. 9, 1907, p. 17. 133. p. 39. 142. pp. 55-56. 158. 164. pp. 293-294. 179. pp. 20-22.

### Northwest Magnesite (27)

Loc: SW  $\frac{1}{4}$  sec. 3, (31-39E), on S. side of Huckleberry Cr. Elev: 3,000 ft. Access: Road from Keystone quarry. Owner: Northwest Magnesite Co., Chewelah, Wash. (1944). Ore: Iron. Ore min: Limonite and a little hematite and magnetite. Gangue: Quartzite. Deposit: Beds of ferruginous quartzite from 1 to 12 in. thick constitute a stratigraphic unit 10 to 15 ft. thick. Grade and quantity too low for commercial use. Ref: 158.

### Pittsburg

Loc: Stevens County. Ore: Iron. Ref: 105, no. 4, 1904, p. 70.

### Read (33)

Loc: N  $\frac{1}{2}$  sec. 14, (30-37E), Deer Trail dist. Elev: 2,700 ft. Access: E. end of property crossed by the old Fruitland-Springdale road. Prop: 2 claims: Granite, Magnetite. Owner: J. W. Glasgow and Henry Becker, Hunters, Wash. (1944). Ore: Iron, copper. Ore min: Magnetite, chalcopryrite, scheelite. Gangue: Calcite, wollastonite, tremolite, garnet, ludwigite, fluorite. Deposit: Contact-metamorphic replacement of limestone. Deposit from a few in. to possibly 40 ft. wide, 3,000 ft. long. Dev: 5 shallow prospect shafts, 2 short adits, several open cuts. The 2 adits and 3 of the shafts are caved. Assays: Magnetite constitutes up to 80% of the body in places, but taken as a whole it is low grade. Prod: A few tons have been smelted. Ref: 18. pp. 12-16. 30, p. 63. 37, pp. 72-73. 48, pp. 18-19. 142, pp. 43-46. 158.

### Scotia (4)

(see under copper)

### Silver King

Loc: Valley dist. Ore: Iron. Ore min: Hematite and some magnetite. Deposit: Veins and bedded deposits principally in limestone and porphyry. Assays: 67.56% to 68.10% Fe, 1.12% to 1.66% SiO<sub>2</sub>, 0.25% to 0.38% S. Ref: 140, pp. 36, 38.

### Taylor (Dunn Mountain) (19)

Loc: Near NE. cor. sec. 31, (33-39E), on SE. slope of Dunn Mtn. in small valley. Elev: 3,000 ft. Access: 1  $\frac{1}{2}$  mi. by road from the Mill Cr. road at a place 6 mi. W. of Addy. Prop: Deeded land. Owner: Charles Taylor, Chewelah, Wash. (1944). Ore: Iron. Ore min: Hematite, magnetite, martite. Gangue: Quartzite. Deposit: Several thin iron-rich beds in quartzite; the thickest is about 10 in. Noncommercial quantity of ore. Dev: Several trenches. Assays: Fair grade of ore but high in silica. Ref: 158.

### Thompson (Iron Tunnel) (9)

Loc: E  $\frac{1}{2}$  sec. 23, (39-41E), at NE. end of Deep Lk. Elev: 3,075 ft. Access: 14 mi. by road from railroad at Northport. Prop: 6 claims: Iron Rich, Iron Farm, Iron State, Iron Tunnel, Iron Slope. Owner: S. J. Morin, Spokane, Wash. (1949-1952). Ore: Iron. Ore min: Limonite, goethite, turgite. Deposit: Limonite occurs as vein in dolomite. It is 3  $\frac{1}{2}$  to 60 ft. wide and continuous for 800 ft. A continuation of the vein has an av. width of 10 ft. and is traceable for 1,000 ft. Dev: 85-ft. adit, numerous pits and trenches. Assays: 16 representative samples from an av. width of 17.8 ft. showed an av. of 53.78% Fe, 0.155% P, 4.22% insol., 0.04% Mn, 0.1% Pb, 0.1% Zn, 0.5% S, 0.04% Ti. Prod: 1941. Ref: 30, p. 97. 48, p. 20. 73, pp. 97-98. 141, pp. 68-69. 142, pp. 51-54. 150, p. 40. 158.

### Tyee

(see Idler)

### Vigilant

(see Kulzer)

### Wolfley (35)

Loc: SE  $\frac{1}{4}$ SW  $\frac{1}{4}$  sec. 16, (29-37E). Access: 8  $\frac{1}{2}$  mi. SE. of Hunters by road. Prop: State land lease. Owner: Conrad Wolfley (1944). Ore: Iron. Ore min: Magnetite, limonite. Gangue: Granite, limestone. Deposit: Ore body about 2 ft. thick along the contact of granite and limestone is exposed in 4 places. Ore can be traced magnetically for only 200 ft. Ore body too small for commercial use. Ref: 158.

### Woohaa

(see Bechtol under lead)

## THURSTON COUNTY

### St. Clair Lake (Talcott) (1)

Loc: SE  $\frac{1}{4}$ SW  $\frac{1}{4}$  sec. 6, (17-1E), on shore at southernmost tip of Lk. St. Clair. Elev: 75 ft. Access: 400 yd. of private road from the Olympia-Yelm highway at a place 9 mi. E. of Olympia. Owner: Noyes Talcott, Olympia, Wash. (1920—). Ore: Iron. Ore min: Limonite (bog iron). Deposit: Av. 4 ft. in thickness and is roughly 450 ft. long and 300 ft. wide. Contains 7,600 tons above the swamp border. Assays: One analysis shows 54.05% Fe<sub>2</sub>O<sub>3</sub>, 14.90% SiO<sub>2</sub>, 7.25% Al<sub>2</sub>O<sub>3</sub>, 2.80% organic matter, 18.20% moisture. Prod: Small amount mined for mineral pigment. Ref: 58, p. 21. 158.

### Talcott

(See St. Clair Lake)

## WHATCOM COUNTY

### Bellingham Placer

Loc: Bellingham area. Ore: Iron, gold. Ore min: Magnetite, hematite, limonite. Deposit: Samples of black sand tested by the U. S. Geological Survey. Assays: Two samples tested. One carried 1,978.6 lb. per ton of magnetite and hematite, the other 1,427.0 lb. per ton of limonite. Each carried tr. Au. Ref: 158.

### Church Mountain (3)

Loc: Approx. sec. 35, (40-7E) and southward. Elev: 1,000 ft. plus. Access: 4 mi. from the railroad at Glacier. Ore: Iron. Ore min: Hematite. Deposit: Impure hematite ore occurs and in fossiliferous (probably Mesozoic) sediments. Ore formed by the dehydration of clayey and sandy limonite, and in part by surficial concentration of iron oxide derived from ferruginous sandstone. Ref: 48, pp. 21-22. 111, p. 7. 158. 179, pp. 51-52.

### Hematite

(see Sumas Mountain)

### Herringa

(see Sturman and Herringa)

### Jim Mountain (5)

Loc: Said to be on Jim Mtn., possibly in sec. 9, (38-40E). Access: Said to be reached from Slate Cr. road by 5 mi. trail up Canyon Cr. Owner: W. E. Gamble, Seattle, Wash. (1912). Ore: Iron. Ore min: Pyrrhotite. Deposit: Said to be massive veins of pyrrhotite 12, 6, and 4 ft. wide. Assays: Samples spectrographed showed 70% to 80% FeS<sub>2</sub>. Ref: 158.

### Ruth Mountain Pyrite (4)

Loc: On Ruth Mtn., approx. in secs. 17 and 20, (39-41E). Mt. Baker dist. Elev: 2,500 to 6,600 ft. Access: Trail from Ruth Cr. road. Owner: Abandoned (1949). Ore: Iron. Ore min: Pyrite. Deposit: Said to be four veins; one

adit, 100-ft. adit, several surface cuts. Assays: A carload of ore shipped in 1930 returned \$1,650. Prod: Ore shipped in 1917, 1922, 1923, 1927, 1929, 1937. Ref: 73, pp. 43-44. 129, pp. 75-80. 139, pp. 46-49. 141, p. 22.

**Conquest**

(see Kootenai Conquest)

**Corzine (108)**

Loc: Sec. 16, (38-42E), Metaline dist. Access: Near road. Prop: 40-acre State lease. Owner: L. D. Corzine (1941). Ore: Lead, silver, zinc. Deposit: Quartz vein 2 to 3 ft. wide. Dev: 40-ft. adit, 16-ft. shaft. Ref: 29, p. 40.

**Cougar (75)**

(see under copper)

**Dan Fieldner**

(see under silver)

**Davenport-Troyer**

(see Gem under iron)

**Diamond Eagle (93)**

(see under zinc)

**Diamond R. (94)**

(see also Metaline Mining & Leasing Co. under zinc)

Loc: Near center sec. 30, (39-43E), 1 mi. W. of old Bella May workings, Metaline dist. Elev: 3,400 ft. Prop: 1 patented claim. Owner: Metaline Mining & Leasing Co., Spokane, Wash. (1936-1952). Diamond R. Mining Co. (1918-1924). Riverview Mining Co. (1931). Century Zinc Co. (1932). Ore: Lead, zinc. Ore min: Galena, sphalerite, smithsonite, cerussite, wulfenite. Gangue: Dolomite, coarse calcite. Deposit: Small irregular streaks of galena in brecciated dolomitic limestone. Dev: An adit reported to contain about 200 ft. of drifts. Prod: A carload of ore shipped in 1918. Ref: 29, p. 31. 73, pp. 66-67. 98, 1922, p. 1643; 1925, p. 1813. 106, 11/19/31. 112, p. 176. 114, no. 5, 1909, p. 54. 128, p. 68. 129, pp. 86-87.

**Doherty**

Loc: Metaline dist. Ore: Lead. Prod: 1925. Ref: 97, 1925, p. 559.

**Dreadnaught-Emily**

(see Hoage under zinc)

**Dumont (29)**

(see under zinc)

**Eagle (33)**

(see under zinc)

**Eagle**

(see Ries)

**Elliot (74)**

Loc: Secs. 18 and 19, (39-44E), Metaline dist. Access: 1 mi. from road. Prop: Several claims. Owner: Formerly Pat Elliot. Believed abandoned (1941). Ore: Lead, silver. Deposit: Fracture zone in slate is impregnated with narrow irregular quartz stringers which carry lead and silver. Dev: Number of open cuts. Ref: 29, p. 36.

**Emily**

(see Hoage under zinc)

**Eureka (31)**

(see under zinc)

**Fairview Copper**

(see Skippy and Queen Bess)

**Fairview-Hoosier (95)**

(see under zinc)

**Falls View (44)**

Loc: Sec. 35, (40-43E), Metaline dist. Owner: Silver-Lead Mining Co. (1907). Ore: Lead. Ref: 116, no. 12, 1907, p. 16.

**Flusey**

(see Flusey-Hoopala)

**Flusey-Hoopala (Flusey) (25)**

(see also Pend Oreille Mines & Metals Co. under zinc)

Loc: E<sub>1</sub>SW $\frac{1}{4}$  sec. 26, (40-43E), on W. bank of Pend Oreille R., Metaline dist. Elev: 2,000 ft. Access: About 9 mi. from Metaline Falls on Z Canyon road. Prop: 2 patented claims: Flusey, Hoopala. Owner: Pend Oreille Mines & Metals Co. (1944). Ore: Lead, zinc, silver, copper. Ore min: Galena, sphalerite, marcasite, pyrite, chalcopryrite, bornite. Gangue: Cherty dolomitic limestone. Deposit: Mineralized shear zones in dolomitic limestone exposed on surface for 300 ft. Dev: Several surface cuts and 2 adits. Assays: Max. values 0.68 oz. Ag, 29.8% Pb, 11.9% Zn. Ref: 29, p. 35. 73, pp. 62-63. 98, 1926, p. 1580. 114, no. 5, 1909, p. 54. 128, p. 68.

**Flying Squirrel**

(see Giant-Flying Squirrel under zinc)

**Four Flush**

(see Bob Tail and Four Flush under zinc)

**Galena Hill**

(see W. Hoopie-Galena Hill under zinc)

**Gardner (2)**

(see under zinc)

**Gem (85)**

(see under iron)

**General MacArthur (Glass) (126)**

Loc: Center sec. 21, (31-45E), Newport dist. Access: Highway crosses the property. Prop: 4 unpatented claims. Owner: Charles I. Barker and associates, Newport, Wash. (1941). Ore: Lead, silver, gold, copper, zinc. Ore min: Galena, chalcopryrite, pyrite. Deposit: A fracture zone as much as 6 ft. wide is impregnated with mineralized quartz. Dev: 700 ft. of adits and shaft, partially caved. Assays: Handpicked sample assayed \$31.50 per ton. Ref: 29, p. 70. 139, p. 43.

**Georgia Rose-Texas Slim (23)**

(see under zinc)

**Giant-Flying Squirrel (12)**

(see under zinc)

**Gilt Top (27)**

(see under zinc)

**Glass**

(see General MacArthur)

**Gold Arrow**

(see Ries)

**Gold Coin-Hardtack (115)**

(see under silver)

**Gold Hill (60)**

Loc: Secs. 12 and 13, (40-44E), Metaline dist. Access:  $\frac{1}{4}$  mi. from road. Prop: 11 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Slight mineralization in the form of a replacement deposit. Dev: Open cuts. Ref: 29, p. 57.

**Golden Anchor**

(see Ries)

**Grandview mine (82)**

(see under zinc)

**Grandview Mines, Inc.**  
(see under zinc)

**Gray Eagle**  
(see Hawkeye-Gray Eagle-Last Chance under copper)

**Gray Goose**  
Loc: Newport dist. Ore: Lead. Prod: 1922. Ref: 97, 1922, p. 254.

**Haliday (36)**  
Loc: Center S½ sec. 30 and center N½ sec. 31, (40-44E), Metaline dist. Access: 1 mi. from road. Prop: 1 patented claim: Hill No. 2. Owner: Moraldus Pierce (1941). Ore: Lead, silver. Deposit: Mineralized fracture zone impregnated with narrow quartz stringers. Dev: 125 ft. of adits, several open cuts. Ref: 29, p. 47.

**Hanley (4)**  
(see under zinc)

**Hansen (130)**  
(see under gold)

**Hanson**  
(see Red Top)

**Hardtack**  
(see Gold Coin-Hardtack under silver)

**Hawkeye-Gray Eagle-Last Chance (124)**  
(see under copper)

**Hemlock (67)**  
Loc: Sec. 15, (40-44E), Metaline dist. Access: 1 mi. from road. Prop: 5 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Small showings of lead and zinc. Ref: 29, p. 55.

**Hidden Treasure (59)**  
(see also Grandview Mines, Inc. and Metaline Mining & Leasing Co. under zinc)

Loc: Secs. 11 and 12, (40-44E), Metaline dist. Access: Forest Service road. Prop: 10 unpatented claims. Owner: Grandview Mines, Inc. and Metaline Mining & Leasing Co. are jointly leasing from Thomas Dougherty and associates, Metaline Falls, Wash. (1952). Ore: Lead, zinc. Ore min: Sphalerite, galena. Deposit: Replacement deposit in silicified limestone has been traced by cuts and trenches for 2,500 ft. or more along the strike. Dev: Considerable trenching and a number of open cuts. Improv: Cabin. Assays: 21 samples taken over the mineralized area assayed tr. to 16.49% Pb, tr. to 6.0% Zn. Prod: None. Some ore in dumps. Ref: 29, p. 60. 158.

**Hoage (13)**  
(see under zinc)

**Hoosier**  
(see Fairview-Hoosier under zinc)

**Hortense (89)**  
(see also Josephine under zinc)

Loc: NE¼SW¼ sec. 18, (39-43E), Metaline dist. Prop: Part of Josephine property. Owner: Pend Orellie Mines & Metals Co. (1930). Ore: Lead. Prod: 1930. Ref: 97, 1930, p. 674.

**Huffman**  
(see Mule Deer)

**Independence (125)**  
(see under silver)

**Ira Troyer**  
(see Troyer)

**Iron Cap (63)**

Loc: Secs. 14 and 15, (40-44E), Metaline dist. Access: 1¼ mi. by trail from good road. Prop: 10 unpatented claims. Owner: Miss E. Thompson and associates, Ione, Wash. (1941). Ore: Lead, zinc. Deposit: Replacement deposit in silicified limestone has been exposed by trenching for a length of 2,000 ft. and as much as 40 ft. in width. Dev: Numerous open cuts and trenches, 300 ft. of diamond drilling. Ref: 29, p. 56.

**Iron Crown (45)**

Loc: Sec. 35, (40-43E), Metaline dist. Owner: Silver-Lead Mining Co. (1907). Ore: Lead. Ref: 116, no. 12, 1907, p. 16.

**Jenny Dee-Snowshoe (65)**

Loc: Secs. 14, 22, and 23, (40-44E), Metaline dist. Access: Road. Prop: 7 unpatented claims. Owner: Messrs. Johnson and Bailey, Metaline Falls, Wash. (1941). Ore: Lead, zinc. Deposit: Replacement deposit in silicified limestone has been exposed for a length of 60 ft. and a width of 10 ft. Dev: Numerous open cuts, stripping. Ref: 29, p. 57.

**Jim Creek (106)**

Loc: SW¼NW¼ sec. 9, SE¼ sec. 10, and sec. 15, (38-42E), Smackout Pass area. Elev: 4,600 ft. Access: 8 mi. by road to railroad at Ione. Prop: 24 claims. Owner: Jim Creek Mines, Inc., Spokane, Wash. (1950—). Ore: Lead, silver, zinc. Ore min: Galena, sphalerite, pyrite. Gangue: Dolomitic marble. Deposit: Strong mineralization in marble near granite contact, in irregular zones 6 to 48 in. wide. Dev: Open cuts. 35-ft. shaft, 178-ft. shaft with workings on the 50-ft. and 150-ft. levels. Improv: 2 cabins, garage, blacksmith shop (1952). Assays: Owner reports av. 15% Pb, 15% Zn, 4 oz. Ag, presumably on picked samples. Ref: 133, p. 35. 158.

**Jordan**

Loc: Metaline dist. Ore: Lead, zinc. Ref: 106, 8/20/31, p. 11.

**Josephine (87)**  
(see under zinc)

**K. K.**

Loc: Metaline dist. Ore: Lead. Prod: 1925. Ref: 97, 1925, p. 559.

**Katydid**  
(see Ries)

**Key Fraction (121)**  
(see also Alger and McCullough)

Loc: SE¼ sec. 15 and NE¼ sec. 22, (32-45E). Access: 8 mi. by road from railroad at Newport. Prop: 1 patented claim, part of Alger and McCullough group. Owner: Ed Alger, Newport, Wash. (1941-1951) leasing to Newport Mining & Leasing Co. (1951). Ore: Lead, silver, copper. Ore min: Galena, chalcocite. Gangue: Quartz, calcite, siderite. Deposit: Irregular branching quartz veins and stringers in diorite near quartzite contact. Dev: 300-ft. adit, 762-ft. adit. Ref: 73, pp. 44-45. 139 pp. 40-41.

**King Tut (Velvet Lode) (54)**

Loc: Secs. 2 and 11, (40-44E), Metaline dist. Access: ½ mi. by trail from good road. Prop: 4 unpatented claims. Owner: Harry Sanborne Metaline, Wash. (1941). Ore: Lead, zinc, silver. Deposit: Replacement deposit in silicified limestone has been traced by open cuts for a length of 500 ft. and a width of 8 ft. Dev: 96 ft. of adit, several open cuts and trenches. Assays: Ore shipped yielded 83.4% Pb, 2.3 oz. Ag. Prod: Some crude lead ore shipped. Ref: 29, pp. 57-58.

**Kootenai Conquest (Bead Lake, Conquest) (118)**  
(see also Bead Lake)

Loc: Near center SE¼ sec. 22, (32-45E). Elev: 2,750 to 2,950 ft. Access: 8 mi. by road from railroad at Newport. Prop:

About 170 acres of patented land and 2 claims. Owner: Newport Mining & Leasing Co., Metaline Falls, Wash. (1951). Conquest Gold & Copper Mining & Milling Co. (1398). Conquest Consolidated Mining Co. (1907). Bead Lake Gold Copper Mining Co. (1908-1926). Bead Lake Mining Co. (1924-1926). Hoover Mining Co. (1930-1942). W. E. Allen (1942). Pend Oreille County (1944-1948). Ore: Lead, copper, silver. Ore min: Galena, chalcopryrite, arsenopyrite, pyrite. Gangue: Quartz, sericite, calcite, siderite. Deposit: Irregular quartz veins and stringers in diorite near its contact with quartzite. One vein 3 to 9 ft. wide. Dev: 200-ft. shaft, 800-ft. adit, 250-ft. adit. Assays: 1.03 oz. Ag, 3.39% Pb, 0.79% Cu. 32.2 tons shipped av. 6.2 oz. Ag per ton, 23.85% Pb. Prod: Ore shipped in 1917, 1922, 1923, 1927, 1929, 1930 (32.2 tons ore), 1937 (5 tons ore). Ref: 29, p. 64. 58, pp. 15, 31. 73, pp. 41-43. 129, pp. 75-80. 139, pp. 46-49. 141, p. 22. 157. 158.

#### Kroll

(see Blue Bucket under zinc)

#### Kurlew (55)

Loc: Secs. 2 and 11, (40-44E). Prop: 4 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Small showings of lead and zinc. Dev: Open cuts. Ref: 29, p. 58.

#### Lakeview (16)

(see under zinc)

#### La Sota (Bromide, Silver Crest) (109)

(see under silver)

#### La Sota (Troyer)

(see Troyer)

#### Last Chance (37)

Loc: Secs. 25, 26, 35, and 36, (40-43E), Metaline dist. Access: Highway passes the property. Prop: 6 unpatented claims. Owner: J. W. Bustua, Metaline Falls, Wash. (1941). Ore: Lead, zinc. Deposit: A mineralized and silicified limestone body has been exposed for a length of 60 ft. and a width of 10 ft. Dev: 25-ft. shaft, numerous open cuts and trenches. Ref: 29, p. 48.

#### Last Chance (57)

Loc: Sec. 11, (40-44E), Metaline dist. Prop: 5 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Small spotty showings of lead and zinc. Dev: Open cuts. Ref: 29, p. 60.

#### Last Chance

(see Hawkeye-Gray Eagle-Last Chance under copper)

#### Lead Hill (61)

(see under zinc)

#### Lead Hill Extension (71)

(see under zinc)

#### Lead King (D. Aldrich) (40)

Loc: Near center sec. 27, (40-43E). Elev: 2,700 ft. Access: About 9 mi. from Metaline Falls on Z Canyon road. Prop: 10 claims, including: Lead King, Robert E. Lee, Twin Lakes, Alameda, Mocking Bird, D. Aldrich. Owner: Pend Oreille Mines & Metals Co. (1928-1945). Lead King Mines Co. (1915-1926). Pend Oreille Lead & Zinc Co. (1928). Ore: Lead, zinc, silver. Ore min: Galena, sphalerite. Gangue: Dolomite, quartz. Deposit: Mineralized quartz and mineralized dolomite breccia. Mineralization is low grade and is mostly in upper 100 ft. of the carbonate rocks. Dev: 191-ft. adit, shallow shafts, 2 short adits, open cuts, trenches, 2,200 ft. of diamond drill holes. Prod: Small shipments 1917-1918, 1925-1926. Ref: 5, pp. 197-198. 7, pp. 48-49. 29, p. 34. 73, pp. 60-62. 97, 1917, 1918, 1925, 1926. 98,

1925, p. 1822; 1926, p. 1586. 113, no. 11, 1937, p. 7. 128, p. 70. 158.

#### Lead Metal (62)

(see under iron)

#### Lead Queen (Scandinavian) (5)

Loc: Center S½ sec. 11, (40-43E), Metaline dist. Elev: 3,000 ft. Access: 12 mi. from Metaline Falls on Crescent Lk. road. Prop: 12 unpatented claims. Owner: Scandinavian Pend Oreille Mining Co. (1943). Ore: Lead, zinc. Ore min: Galena, sphalerite. Gangue: Calcite, quartz. Deposit: Silicified zone in dolomitic limestone. Churn drill holes 800 ft. apart have shown mineralization. Dev: Several open cuts and trenches, churn drill holes. Prod: Has produced. Ref: 29, pp. 48-49. 97, 1917, p. 503. 106, 8/4/31, p. 4. 128, p. 74. 158.

#### Little Noisy (79)

(see under zinc)

#### Lloyd (128)

Loc: Sec. 10, (30-45E), Newport dist. Access: Road. Prop: 1 unpatented claim. Owner: Dan Lloyd, Newport, Wash. (1941). Ore: Lead, silver, copper, zinc. Deposit: Said to be a mineralized quartz vein about 18 in. wide. Dev: 22-ft. shaft, 50 ft. of trenching. Ref: 29, p. 68.

#### Lookout (30)

Loc: Sec. 30, (40-44E), Metaline dist. Access: Near road. Prop: 2 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Slight mineralization. Dev: Open cuts. Ref: 29, p. 47.

#### Lucky Boy (56)

Loc: Sec. 10, (40-44E), Metaline dist. Access: 4 mi. from road. Prop: 4 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Sparsely mineralized replacement deposit. Dev: Open cuts. Ref: 29, p. 53.

#### Lucky Boy Rex (28)

(see under zinc)

#### Lucky Strike (46)

(see under zinc)

#### M M (17)

Loc: Sec. 1, (40-43E), Metaline dist. Access: Highway crosses the property. Prop: 11 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Slight showings of lead and zinc along a replacement zone. Largely hidden by heavy overburden. Dev: Open cuts mostly in overburden. Ref: 29, p. 50.

#### McCullough

(see Alger and McCullough under copper)

#### Mack (68)

Loc: Sec. 15, (40-44E), Metaline dist. Access: 4 mi. from road. Prop: 11 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Slight showings of lead and zinc. Dev: Open cuts, partially caved. Ref: 29, p. 54.

#### Mammoth

(see Morning and Mammoth)

#### May Thomas

Loc: Metaline dist. Owner: Drumheller Investment Co. (1937). Ore: Lead, zinc. Ref: 113, 6/17/37, p. 7.

#### Maybeso (69)

Loc: Sec. 15, (40-44E), Metaline dist. Prop: 2 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Said to be small values in lead and zinc. Dev: Open cuts. Ref: 29, p. 57.

wide. Dev: 620-ft. crosscut short of the vein, and a 25-ft. adit. Ref: 29, p. 69. 98, 1925, p. 1825; 1926, p. 1589. 139, p. 54. 157. 158.

### Snowshoe

(see Jenny Dee-Snowshoe)

### Snyder

(see Gold Coin-Hardtack under silver)

### Sphinx

(see Torrential-Sphinx under zinc)

### Stanley

(see Snowbird and Stanley)

### Star (34)

Loc: Sec. 28, (40-44E), Metaline dist. Access: 2 mi. from road. Prop: 4 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Sparse disseminations of lead and zinc. Dev: Open cuts, partially caved. Ref: 29, p. 54.

### Star (32)

Loc: Sec. 29, (40-44E), Metaline dist. Access:  $\frac{3}{4}$  mi. from road. Prop: 4 unpatented claims. Owner: George Wehnert, Metaline Falls, Wash. (1949). Ore: Lead, zinc. Deposit: Replacement deposit in limestone has been exposed on the surface for a length of 100 ft. and a width of 20 ft. Dev: Open cuts, trenches. Ref: 29, p. 59.

### Star (Campbell)

(see Campbell under copper)

### Star (Independence)

(see Independence under silver)

### Sterling (100)

(see under zinc)

### Sullivan (88)

(see also Josephine under zinc)

Loc: NW  $\frac{1}{4}$  sec. 16, (39-43E), Metaline dist. Prop: Part of Josephine property. Owner: Sullivan Mining Co. (1924). Ore: Lead, zinc. Ore min: Galena, sphalerite. Prod: 1926. Ref: 73, p. 59. 97, 1926, p. 468; 1930, p. 674.

### Sullivan Lake

(see Poorman and Sullivan Lake)

### Sunshine (70)

Loc: Secs. 16 and 21, (40-44E), Metaline dist. Access: Road. Prop: 10 unpatented claims. Owner: E. O. Dressel and associates, Metaline Falls, Wash. (1941). Ore: Lead, zinc. Deposit: Fracture in dolomite impregnated with quartz stringers and mineralized with lead and zinc. Mineralized zone has been exposed for a length of 100 ft. and a width of 4 ft. Dev: Open cuts, trenches. Ref: 29, p. 55.

### Tamarack (51)

Loc: Sec. 2, (40-44E), Metaline dist. Prop: 5 unpatented claims. Owner: Abandoned (1941). Ore: Lead, zinc. Deposit: Slight showings of lead and zinc. Dev: Open cuts. Ref: 29, p. 59.

### Texas Slim

(see Georgia Rose-Texas Slim under zinc)

### Tom Cat (3)

(see under zinc)

### Torrell

Loc: NW. of Ione. Ore: Lead, zinc. Ref: 108, 9/51, p. 79.

### Torrential-Sphinx (6)

(see under zinc)

### Troyer (Davenport-Troyer, Gem)

(see Gem under iron)

### Troyer (La Sota, Ira Troyer) (66)

Loc: Near center sec. 22, (40-44E), on NE. bank of Slate Cr., Metaline dist. Elev: 3,750 ft. Access: Road. Owner: F. P. La Sota and E. P. Jones, Metaline Falls, Wash. (1951—), Ira Troyer (1943). Ore: Lead, zinc. Ore min: Galena. Gangue: Jasperoid. Deposit: Mineralized zone 50 ft. in dia. in brecciated dolomite directly below Ledbetter slate. Dev: Diamond drill holes. Ref: 104, 7/15/34, p. 27. 128, p. 64. 133, p. 36. 158.

### Twin Lakes (14)

Loc: Secs. 22 and 27, (40-43E), Metaline dist. Access: Road. Prop: 3 unpatented claims. Owner: James Ehle and associates, Metaline, Wash. (1941). Ore: Lead, zinc. Deposit: Replacement deposit in silicified limestone has been exposed in several places along the strike for a distance of 200 ft. Dev: 40-ft. shaft, open cuts, trenches. Ref: 29, p. 58.

### Uncas (35)

(see under zinc)

### Velvet

Loc: Metaline dist. Owner: Northwest Explorations, Inc. (1931). Ore: Lead, zinc. Ref: 106, 9/17/31.

### Velvet Lode

(see King Tut)

### Washington (Washington Rock) (84)

(see also Pend Oreille Mines & Metals Co. under zinc)

Loc: NE  $\frac{1}{4}$  sec. 21, (39-43E), on W. bank of Pend Oreille R. on top of Washington Rock. Elev: 2,700 ft. Access:  $\frac{1}{4}$  mi. by road from the town of Metaline Falls. Prop: Group of claims including the Washington. Owner: Pend Oreille Mines & Metals Co. (1943). Lead King Mines Co., Inc. (1924-1928). Lehigh Portland Cement Co. (1935-1936). Ore: Lead, zinc, silver, iron. Ore min: Limonite, galena, pyrite, sphalerite. Gangue: Dolomite. Deposit: Said to be a body of solid pyrite mixed with galena. Ore occurs as a replacement of dolomite along a fracture zone between two faults. Limonite body formed by oxidation of pyrite. Dev: 90-ft. adit, several open cuts. Assay: Smelter returns on a sample of the galena-pyrite ore showed 26.2% Pb, 12.6% Zn, 0.8 oz. Ag, no Au, 15.4% Fe. Prod: Some production of lead-silver-zinc ore. Limonite was mined by the Lehigh Portland Cement Co. for use in portland cement in 1936. Ref: 46, pp. 7-19. 73, pp. 55-56. 98, 1925, p. 1822; 1926, p. 1586. 128, pp. 75, 78. 158.

### Washington Rock

(see Washington)

### West

(see Blue Jim under silver)

### Whoopie-Galena Hill (64)

(see under zinc)

### Wolf Creek (Berkin) (104)

Loc: NW  $\frac{1}{4}$  sec. 4, (38-43E), on E. side Pend Oreille R., Metaline dist. Elev: 2,300 ft. Access: 2  $\frac{1}{2}$  mi. by road S. of Metaline Falls. Prop: 14 claims: Wolf Creek Lead Nos. 1-4, Silver Lead Nos. 1-3, and 2 others. Owner: Fred E. Davenport and Ira Troyer (1945). Ore: Lead, zinc, silver, iron. Ore min: Galena, sphalerite, pyrite, hemimorphite (?), limonite. Gangue: Dolomite, paligorskite, gypsum. Deposit: Breccia zone in dolomite between 2 intersecting shear zones. Exposed to width of 15 ft. and length of 80 ft. in one adit. Dev: Several shallow adits and surface cuts and an inaccessible inclined shaft. Ref: 29, p. 42. 46, p. 34. 73, p. 73. 104, 7/15/34, p. 27. 128, p. 75. 158.



**Woodpecker (41)**  
(see under zinc)

**Yellowhead**  
(see under zinc)

**Z Canyon (Pine Cone-Z Canyon)**  
(see Pine Cone-Z Canyon under zinc)

**Z Canyon (Silverado) (7)**  
(see also Pend Oreille Mines & Metals Co. under zinc)

Loc: SW  $\frac{1}{4}$  sec. 11, (40-43E), on E. side Pend Oreille R., Metaline dist. Elev: 2,300 ft. Access: 2 mi. W. of Crescent Lk. by road. Prop: 18 unpatented claims. Owner: Pend Oreille Mines & Metals Co., Spokane, Wash. (1943). Washington Mining & Milling Co. (1910-1930). Z-Canyon Mutual Mines Co. (1931-1932). Z-Canyon Consolidated Mines Co. (1934-1936). Z-Canyon Mining Co. (1941). Ore: Lead, zinc, gold. Ore min: Galena, sphalerite, smithsonite, greenockite. Gangue: Dolomite, coarse calcite. Deposit: Ore minerals disseminated in dolomite and breccia. Mineralized zone has been exposed for a length of 800 ft. on the surface. Dev: Several shallow cuts and 2 adits totaling about 120 ft. Prod: Small amount in 1926. Ref: 29, p. 50. 73, p. 72. 97, 1925, p. 559; 1926, p. 468. 104, 2/15/34, p. 20; 10/30/35, p. 25; 12/15/36, p. 27. 106, 5/21/31; 5/19/32; 7/34. 113, 6/34, p. 15; 7/34, p. 15; 10/34, p. 14; 8/36, p. 6. 128, pp. 75-76. 158.

**Z Canyon Mutual (19)**  
(see under zinc)

## PIERCE COUNTY

**Silver Creek (2)**  
(see under gold)

**Silver Creek Gold & Lead (1)**  
(see under gold)

## SKAGIT COUNTY

**Alta (12)**

Loc: Approx. in sec. 24, (35-13E). Prop: 4 claims: Alta, Montreal, Cerrico, Helena Butte. Ore: Lead, silver, zinc. Ore min: Galena, sphalerite, pyrite, arsenopyrite. Deposit: A cross vein of the Boston vein consisting of a quartz vein in a shear zone in gneiss near diorite contact. Ref: 13, p. 140.

**Black Canyon**

Loc: Cascade dist. Ore: Lead. Ore min: Galena. Deposit: 12-in. paystreak in  $4\frac{1}{2}$ -ft. vein. Ref: 63, p. 56.

**Boston (13)**

Loc: Sec. 24, (35-13E), and sec. 19, (35-14E), N. side of Boston Basin. Elev: 5,500 to 6,000 ft. Access: Trail from end of Cascade R. road. Prop: 4 patented claims. Owner: Adolph Behrens and sons estate (1934). J. C. and G. L. Rouse (1892). Ore: Lead, silver, zinc, gold, copper. Ore min: Galena, arsenopyrite, pyrite, sphalerite, calcanthite, chalcoppyrite. Gangue: Quartz, calcite, grossularite. Deposit: A 6- to 9-ft. quartz vein in foliated diorite. Some faulting along the vein. Dev: 35-ft. adit and a 60-ft. lower adit. Assays: Chip sample across back of upper adit shows 8 in. of ore assaying 0.16 oz. Au, 8.4 oz. Ag, 0.2% Cu, 22.1% Pb, 13% Zn; and 6 ft. of ore assaying 0.02 oz. Au, tr. Ag, 0.4% Pb, 1.5% Zn. Prod: 2 tons shipped in 1890's. Ref: 12, p. 93. 13, p. 138. 63, p. 55. 105, no. 21, vol. 62, p. 325. 158.

**British**

(see Skagit Queen under silver)

**Buchanan**

(see Queen under copper)

**Cascade (24)**

Loc: NW  $\frac{1}{4}$  sec. 7, (34-13E), on S. Fk. of Cascade R. Prop: 3 claims: Cascade, Iron Clad, Silver Butte. Owner: Messrs. McIntosh and Daly (1892). Ore: Lead, silver, gold. Ore min: Pyrite. Deposit: 5-ft. vein with a 10-in. paystreak. Dev: 100-ft. adit. Assays: 32% to 37% Pb, 48 to 51 oz. Ag, tr. Au. Ref: 13, p. 141. 63, p. 56.

**Cascade Minerals**

Loc: Thunder Cr. dist. Owner: Cascade Minerals Corp. (1928). Ore: Lead, silver. Prod: 1927. Ref: 97, 1928, p. 701.

**Cerrico**

Loc: T. 35 N., R. 13 E., Cascade dist. Ore: Lead, zinc. Ore min: Galena, sphalerite, arsenopyrite, pyrite. Deposit: Quartz vein in shear zone in gneissic diorite. Ref: 13, p. 173.

**Chicago (14)**

Loc: Western extension of the Boston claim in sec. 24, (35-13E), Cascade dist. Prop: 4 claims: Chicago, Cincinnati, New York, Buffalo. Owner: Gilbert, Landry, Landers and Co. (1892). Ore: Lead, silver, gold, zinc. Ore min: Galena, sphalerite, arsenopyrite, pyrite. Deposit: 6- to 9-ft. quartz vein in gneissic diorite. Ref: 13, p. 139. 63, p. 55.

**Dorothy**

(see Thunder Creek)

**Eldorado (11)**

(see under silver)

**Epoch (25)**

Loc: Near center E  $\frac{1}{2}$  sec. 10, (34-13E), on Middle Fk. of Cascade R. Access:  $2\frac{1}{2}$  mi. by trail from Mineral Park. Ore: Lead, silver, gold. Ore min: Galena. Deposit: Said to be a 3-ft. vein of solid galena ore. Dev: Adit. Assays: 38% to 45% Pb, 39 to 102 oz. Ag, tr. Au. Ref: 13, p. 141.

**Everett**

(see Willis and Everett under silver)

**Everett Extension**

(see under silver)

**Friend (16)**

(see under silver)

**Grand Republic (27)**

Loc: Sec. 1, (34-13E), Cascade dist. Ore: Lead, silver. Ref: 58, p. 27. 63, p. 56.

**Granite (22)**

(see under silver)

**Hartford (3)**

Loc: Sec. 19, (35-14E), eastern extension of the Boston claim. Prop: 1 claim. Owner: George Sanger (1892). Ore: Lead, silver, gold. Ore min: Galena, pyrite. Gangue: Quartz. Deposit: Similar in width and character to the Boston vein. Ref: 13, p. 139.

**Icgate**

Loc: Thunder Cr. dist. Ore: Lead. Ore min: Galena. Ref: 63, p. 59.

**Iowa-Olympia**

(see under silver)

**Johnsburg (23)**

Loc: Secs. 27 and 34, (35-13E), Cascade dist. Elev: 5,100 ft. Access: 22 mi. from Marblemount on Cascade R. road. Prop: 4 patented claims: Johnsburg, Lookout, Tarcoo Union, Prospectors Friend. Owner: Kaess Mining Co., Mount Vernon, Wash. (1954—). Silver Queen Mining & Smelting Co. (1892).

limonite. Gangue: Quartz. Deposit: Ores replace limestone at fracture intersections. Dev: 25-ft. shaft. Ref: 30, p. 93. 164, p. 309.

**Black Rock (58)**  
(see under zinc)

**Black Witch**  
(see Alma under silver)

**Bland**

Loc: Near Cleveland mine, Deer Trail dist. Ore: Lead, copper, silver. Ref: 63, p. 114.

**Bliss**  
(see Galena Hill)

**Blue Lime (Sauvola) (96)**  
Loc: NW¼NE¼ sec. 18, (39-42E), Northport dist. Elev: 3,800 to 4,200 ft. Access: 4 mi. by road from Leadpoint. Prop: 1 claim: Blue Lime. Owner: Walter L. Sauvola and associates (1949). Ore: Lead. Deposit: Lead ore said to occur as chimneys. Dev: 50-ft. shaft. Ref: 25, p. 6. 30, p. 94.

**Blue Ridge**  
(see Sierra Zinc under zinc)

**Blue Star**  
(see Eagle under silver)

**Bluegrouse (155)**  
(see under silver)

**Bonanza (148)**  
Loc: Secs. 2 and 11, (37-38E), 5 mi. SE. of Bossburg. Elev: 2,200 ft. Access: ½ mi. by truck road from Echo Valley road. Prop: 60 acres of patented land. Owner: Bonanza Lead, Colville, Wash. (1946—). Deer Trail Consolidated Mining Co. (1902-1924). Bonanza Mining Co. (1929-1930). Northern Lead Mining & Milling Co. (1930-1931). Russell Parker (1942). George Vervacke (1943). Anaconda Copper Mining Co., Butte, Mont. (1951-1952). Ore: Lead, silver, zinc, copper. Ore min: Steel galena, pyrite, sphalerite. Gangue: Quartz, siderite. Deposit: Lenticular deposit along a shear zone in chlorite and graphite schist. Ore occurs as irregular stringers in the zone. Zone as much as 4 ft. wide. New ore body 27 ft. thick discovered in 1950. Dev: More than 15,000 ft. of underground workings. Improv: 100-ton flotation mill at Palmers (1955). Assays: Ore said to contain 22% Pb, 30% Fe, 2.7% SiO<sub>2</sub>, 10.5% S, 4.7 oz. Ag. Prod: 1906-1908, 1910-1911, 1914, 1916, 1923-1924, 1929-1930, 120 tons 1923. 2,000 tons prior to 1890. \$40,000 prior to 1944 reported. \$2,000,000 from 1944 to 1950. 1949 (14,163 tons ore). 1950 (20,000 tons ore). 1951 (13,700 tons ore). 1952-1954. Ref: 7, pp. 63-64. 12, pp. 26, 76. 13, p. 121. 30, p. 82. 63, pp. 112-113. 73, pp. 118-120. 88, p. 7. 97, 1907, 1908, 1911, 1912, 1915, 1917, 1923, 1924, 1929, 1930, 1942-1952. 106, 6/5/30, p. 19; 8/7/30, p. 20; 11/19/31. 129, pp. 117-119. 133, p. 31. 141, pp. 21, 22. 158. 164, pp. 174-176.

**Botts (138)**  
Loc: Secs. 3 and 10, (37-39E), on E. side of Clugston Cr. near its head, Northport dist. Elev: 3,200 to 3,350 ft. Access: Near road. Prop: 3 unpatented claims. Owner: Abandoned (1941). Ore: Lead, silver. Ore min: Argentiferous galena. Gangue: Quartz. Deposit: Ore and quartz occur as small nodules and irregular shapes replacing limestone along zones of fracture. Dev: Several short adits, open cuts, and shallow shafts, total about 60 ft. Ref: 30, p. 84. 164, p. 242.

**Boucher**  
(see Wildcat)

**Boundary Silver Lead**  
(see Lucile under zinc)

**Brooks (207)**  
(see under silver)

**Bruce Creek**  
(see A and C under copper)

**W. J. Bryan**  
(see Bechtol)

**Buck Mountain**  
(see under silver)

**Buffalo (73)**  
(see under silver)

**Bullion (33)**  
Loc: Sec. 8, (39-39E), on hill overlooking Rattlesnake Valley. Elev: 3,800 ft. Access: 8 mi. W. of Northport. Prop: 7 claims. Owner: S. M. Kaemmerling, Philadelphia, Pa. (1942). Bullion Mining Co. (1902). Ore: Lead, silver, gold, copper, zinc. Ore min: Galena, sphalerite, chalcopryrite, bornite. Deposit: Said to be 50- to 80-ft. quartz veins cutting argillite and schist. Dev: Shaft, reportedly 160 ft. deep, from which drifts of 80 and 100 ft. have been driven. Assays: Conc. av. 70% Pb, 40 oz. Ag, \$2 Au. Prod: Small shipment in 1924. Ref: 88, pp. 5-6. 97, 1925, p. 561. 164, p. 255.

**Burrus (119)**  
(see under zinc)

**Cast Steel (52)**  
Loc: Sec. 10, (39-40E), Northport dist. Access: Road. Prop: 2 patented claims. Owner: Judge Carey estate (1941). Ore: Lead, silver. Deposit: Quartz vein said to av. 4 ft. in width and to be traceable for 400 ft. on the surface. Dev: 400-ft. vertical shaft, 200-ft. inclined shaft. Both caved. Prod: Reportedly some ore shipped prior to 1941. Ref: 30, pp. 96-97.

**Cedar Canyon**  
(see under silver)

**Center Star (130)**  
(see under silver)

**Chewelah Consolidated (172)**  
Loc: N. part sec. 25, (34-40E), on a branch of N. Fk. of Chewelah Cr. Access: 12 mi. due N. of Chewelah. Prop: 4 claims. Owner: Bean and Stolp Lumber Co. (1941). German Silver and Gold Mining Co. (1908). Ore: Lead, silver, gold, copper. Ore min: Galena, chalcopryrite, pyrite, arsenopyrite. Deposit: Metamorphic series of schist, conglomerate, quartzite, and greenstone cut by veins of quartz. One vein 6 ft. wide. Dev: 200-ft. adit 125-ft. shaft, and other shallow shafts, short adits, and open cuts. Assays: One vein said to assay \$51 Au. Ref: 30, p. 36. 116, no. 6, 1908, p. 123. 164, pp. 162-163.

**Chewelah Eagle**  
(see Eagle under silver)

**Chewelah Silver**  
(see Fred B.)

**Chloride (198)**  
Loc: Near S. ¼ cor. sec. 7, (30-37E), 100 ft. W. of the highway, Cedar Canyon dist. Access: 1 mi. S. of Hunters on Hunters-Fruitland highway. Owner: Mr. Isaacson (1939). Ore: Lead, silver. Ore min: Pyrite, arsenopyrite, galena. Gangue: Calcite. Deposit: A 2-ft. quartz vein in argillite carries pyrite, arsenopyrite, and galena. Pyrite also occurs along fractures in the argillite. Dev: 100-ft. adit, open cuts, several shafts, 50-ft. adit. Ref: 158.

**Chloride Queen (Colville Queen) (131)**  
Loc: E½ sec. 23 and W½ sec. 24, (37-39E), on one of E. branches of Clugston Cr. Elev: 3,400 to 3,515 ft. Access: 1

mi. E. of Clugston Cr. highway by road. 15 mi. from railroad at Colville. **Prop:** 4 unpatented claims. **Owner:** Clugston Creek Mining Co., Spokane, Wash., leasing from Colville Queen Mining Co. (1949-1951). Chloride Queen Mining Co. (1920-1926). Mohawk Consolidated Mining & Smelting Co. (1930). Union Mining & Smelting Co. (1930). Colville Queen Mining Co. (1937-1951). **Ore:** Lead, silver, zinc, copper, iron. **Ore min:** Galena, cerussite, chalcopyrite, sphalerite, limonite, pyrite. **Gangue:** Quartz, siderite. **Deposit:** 5-ft. quartz vein along contact of quartzite and dolomite. Lead-silver ore also found in a silicified breccia zone in dolomite. Limonite ore occurs in the dolomite. **Dev:** 350-ft. adit in which are drifts, shafts, and stopes, a longer adit at lower elevation, and surface workings said to total 2,000 ft. **Assays:** 34.3% Pb, 14 oz. Ag. Some limonite ore assayed \$13 Ag, Pb. **Ore from stope** said to assay 18% to 20% Zn, 3% Cu, 16% Pb. 3 oz. Ag. **Prod:** 400 tons of limonite ore shipped to Colville smelter in early days. Lead ore shipped in 1900, 1914, 1925, 1928. **Ref:** 12, p. 81. 13, p. 126. 30, p. 79. 46, pp. 43-45. 48, p. 19. 73, pp. 113-115. 97, 1926, p. 469; 1929, p. 429. 98, 1922-1925. 104, 2/28/37, p. 28. 105, no. 124, 1922, p. 381. 106, no. 15, 1921, p. 8; no. 23, 1923, p. 5; 5/1/30, p. 20; 9/4/30. 113. 2/4/37, p. 6. 117, no. 9, 1922, p. 7; no. 16, 1922, p. 7. 142, pp. 46-47. 158. 164, pp. 235-237.

#### Cholett

(see under zinc)

#### City View (151)

(see under gold)

#### Cleveland (Santa Rita) (195)

**Loc:** Secs. 3, 4, 9, and 10. (30-38E), at head of Hunters Cr., Deer Trail dist. **Elev:** 3,400 ft. **Access:** 10 mi. E. of Hunters by road. 25 mi. to railroad at Springdale. **Prop:** 12 patented claims and 1 fraction. **Owner:** Stewart Compton, Bayview, Idaho, leasing to Frank Marr, Spokane, Wash. (1952). F. R. Tinsby and W. L. Falter (1892). Cleveland Mining & Milling Co. (1917). Sharp Mining Co. (1918). Santa Rita Mining Co. (1918, 1922-1926). Cleveland Mining Co. (1920-1922). Base Metals, Inc. (1950). Leased by Spokane-Idaho Mining Co. (1951). **Ore:** Lead, zinc, silver, antimony. **Ore min:** Sphalerite, galena, tetrahedrite, bournonite, arsenopyrite, pyrite, cerussite, anglesite. **Gangue:** Calcite, siderite, quartz. **Deposit:** Series of argillite, quartzite, and dolomite cut by basic dikes is the country rock. Lenses of ore lie along parallel brecciated zones in the dolomite. Richest ore from surface down to 100-ft. depth. **Dev:** Adit with several hundred ft. of drifts and cross-cuts, 200-ft. inclined shaft, with a 250-ft. drift, 50-ft. shaft, other short adits and shafts. **Assays:** 4,000 tons produced in 1942 said to av. 6% Pb, 6% Zn. Weighted av. of 6 samples from av. width of 11 ft. showed 6.85% Pb, 3.07% Zn, 1.03% Sb, 3.77 oz. Ag. **Prod:** 1,500 tons prior to 1897. 1910, 1917, 1921-1924, 1937-1939, 1942-1944, 1947. **Ref:** 30, p. 74. 46, pp. 91-96. 63, p. 114. 68, p. 6. 73, pp. 127-132. 97, 1911. 1918, 1922-1925, 1938-1940. 98, 1918-1926. 100, 1899, p. 210. 104, 1/15/37. 106, no. 12, 1918. 112, p. 173. 132, pp. 137-141. 133, p. 32. 141, pp. 21, 22, 43. 157. 158. 164, pp. 205-209.

#### Clugston

(see Silver Trail)

#### Coffer (25)

(see under copper)

#### Columbia

(see Iroquois under zinc)

#### Colville Queen

(see Chloride Queen)

#### Comstock (10)

(see under copper)

#### Comstock (Abe Lincoln) (36)

**Loc:** Sec. 6, (40-39E), on W. slope of Sophia Mtn. near international boundary. **Access:** 15 mi. by road to railroad at Northport. **Prop:** 5 unpatented claims. **Owner:** John and Elmer Godfrey, Northport, Wash. (1941). **Ore:** Lead, zinc, silver, gold. **Ore min:** Pyrite. **Gangue:** Quartz. **Deposit:** Said to be a vein 3 ft. or more wide and 8,000 ft. long. **Dev:** 350-ft. adit, 50-ft. shaft. **Assays:** 7% Pb, 7% Zn, 2 oz. Ag, 0.10 oz. Au. **Ref:** 30, p. 111. 46, p. 87. 158.

#### Contention

(see Mountain View under silver)

#### Copper-Gold

(see Coffer under copper)

#### Copper King (113)

**Loc:** Sec. 20, (38-41E). **Elev:** 2,500 ft. **Access:** 15 mi. by road from railroad at Northport. **Prop:** 3 claims. **Owner:** Charles Clarke, A. E. Wilkerson, C. L. Baker, Spokane, Wash. (1941-1951). Lew Towner (1910). **Ore:** Lead, zinc, gold, iron. **Ore min:** Galena, sphalerite, pyrite, pyrrhotite. **Deposit:** Quartz veins in limestone near granite contact. Also some low-grade disseminated sphalerite and galena in limestone. **Dev:** 90-ft. shaft with a 40-ft. crosscut, a 200-ft. adit, 17 diamond drill holes from the crosscut at bottom of shaft reported. 4 of these holes reported to have cut 14-ft. vein containing tetrahedrite. **Prod:** Several shipments reported sent to Northport smelter for flux. **Ref:** 30, p. 90. 111, p. 8. 157. 158.

#### Copper King (88)

**Loc:** NE. cor sec. 25, (40-41E), Northport dist. **Elev:** 3,400 to 3,700 ft. **Access:** 1½ mi. from Deep Cr. road on Red Top Mtn. road. **Prop:** 2 claims: Copper King Nos. 1 and 2. **Owner:** Red Top Mining Co., Spokane, Wash. (1941). **Ore:** Lead, zinc, silver. **Ore min:** Galena, sphalerite, tetrahedrite. **Gangue:** Quartz. **Deposit:** Ore occurs along contact of limestone and an intrusive dike. Also a 6- to 7-in. quartz vein in limestone. Bands of galena and sphalerite 4 to 10 in. wide. **Dev:** 285-ft. adit, 20-ft. shaft, 221-ft. adit. **Prod:** Has produced. **Ref:** 7, pp. 57-58. 30, p. 107. 46, pp. 76-77. 73, p. 102. 116, no. 3, 1908, p. 102. 158. 164, pp. 299-300.

#### Copper Queen (177)

(see under copper)

#### Coyote (Rightside)

(see Rightside under copper)

#### Coyote (Coyotte) (40)

**Loc:** Sec. 26 or 23, (40-39E). **Access:** 2 mi. W. to railroad at Northport. **Prop:** 3 patented claims. **Owner:** T. T. Richardson, Northport, Wash. (1941). **Ore:** Lead, silver, zinc, gold. **Ore min:** Argentiferous galena. **Gangue:** Quartz. **Deposit:** Argillite and limestone intruded by granite. A 2-ft. mineralized zone parallels the bedding in argillite. **Dev:** Shaft with 20-ft. drift at 20-ft. level, considerable trenching and open cut work. **Assays:** Said to run \$30 to \$60 per ton. **Prod:** Some lead-silver ore shipped 1915-1916. **Ref:** 30, p. 91. 46, p. 64. 63, p. 108. 97, 1916, p. 616; 1917, p. 506. 158. 164, p. 313.

#### Coyotte

(see Coyote)

#### Crackerjack (139)

**Loc:** Secs. 3 and 10, (37-39E), Colville dist. **Access:** 12 mi. N. of Colville by road. **Ore:** Lead. **Ref:** 158.

assayed as high as 7% Pb, 1.84% Zn. Prod: Every year (except 1945-1946) from 1901 to 1955. Total to 1953, 9,274 oz. Ag, 835 lb. Cu, 14,793,421 lb. Pb, 41,357 lb. Zn. Ref: 22, p. 6. 25. 30, p. 94. 73, pp. 90-94. 97, 1917, 1922-1926, 1928, 1930, 1931, 1934, 1935, 1937, 1938, 1940. 98, 1918-1926. 104, 12/15/34, p. 22; 7/30/35, p. 24; 4/15/37, p. 35. 106, no. 1, 1920, p. 50; no. 9, 1920, p. 2; no. 20, 1922, p. 2; 3/3/32; 9/15/32; 9/7/33. 112, p. 180. 129, pp. 102-104. 141, pp. 21, 22, 43. 150, p. 31. 158. 164, pp. 307-308.

#### Globe (24)

(see under copper)

#### Gold Bar (149)

(see under gold)

#### Gold Hill

(see under gold)

#### Good Enough

(see Sandiego under silver)

#### Gorien Zinc

(see under zinc)

#### Gray Eagle

(see Rightside under copper)

#### Great Northern (99)

Loc: Secs. 12 and 13, (39-41E), Northport dist. Access: 2½ mi. from Leadpoint on road to Gladstone mine. Owner: Wm. McCue. Ore: Lead. Ref: 158.

#### Great Republic (38)

(see under copper)

#### Great Western (62)

Loc: SW¼SW¼ sec. 24, (39-40E). Joins Last Chance property on N. Elev: 3,120 ft. Access: 6 mi. by road from railroad at Northport. Prop: 2 patented claims: Great Western, Empire. Owner: Sylvia K. Lemna, Long Beach, Calif. (1953). Last Chance Consolidated Mines, Inc., Spokane, Wash. (1948-1952). Norman Mines Co. (1915-1920). Ore: Lead, zinc. Ore min: Galena, sphalerite, smithsonite, cerussite. Gangue: Silicified limestone. Deposit: Ore is in pre-mineral faults in fine-grained marble along which are limonite seams from 0 to 18 in. wide, containing locally up to 50% galena as rich lenses. Known length of the mineralized fault zone is 1,000 ft. Dev: 1,000 ft. of adits and about 200 ft. in 3 shafts. Assays: One carload returned 16.4% Pb, 28.2% Zn. Prod: \$40,000 prior to 1917. Ref: 30, pp. 98-99. 46, p. 54. 73, pp. 106, 107. 97, 1916, 1925, 1926, 1928, 1929. 98, 1918, p. 1469; 1920, p. 1499. 105, 1916, p. 27; 130, p. 91. 133, p. 36. 158. 164, p. 311.

#### Grubstake

(see under silver)

#### H & B

(see Aichan Bee under silver)

#### Ham (Steel Galena, Iron Cap) (166)

Loc: NW¼NW¼ sec. 32, (34-39E). Access: 8 mi. by road to railroad at Addy. Prop: 40 acres of State-owned land. Owner: Leased by H. A. Ham, Colville, Wash. (1942). Ore: Lead, silver, gold. Ore min: Galena. Deposit: Several large galena boulders found in glacial drift. One boulder reportedly produced 12 tons of ore. No vein has been discovered in the vicinity. Dev: About 600 ft. of adits, and pits mostly in glacial drift. Assays: 25% to 40% Pb, 4 to 22 oz. Ag, tr. to \$4.00 Au. Prod: Several boulders totaling about 15 tons of ore were shipped in 1890. Ref: 30, p. 53. 58, p. 65. 158.

#### Hartbauer (89)

Loc: Sec. 25, (40-41E), Northport dist. Access: Near road. Prop: 40 acres of deeded land. Owner: Konrad Hartbauer,

Northport, Wash. (1941). Ore: Lead, silver, zinc. Deposit: Mineralized fracture zone with a max. width of 2 ft. Dev: 70-ft. adit, 2 open cuts. Ref: 30, p. 101.

#### Hartford

(see Krug under copper)

#### Hazel (81)

(see under silver)

#### Helena Johnson (60)

Loc: Sec. 24 (39-40E), on Deep Cr., Northport dist. Access: Road. Prop: 1 claim. Owner: Under lease to Telford I. Moore and Firmer Walkely (1941). Ore: Lead, zinc, silver. Dev: Adit. Ref: 30, p. 110. 46, p. 71.

#### Hi Cliff

(see Uncle Sam)

#### High Grade

(see Jay Dee under silver)

#### Highland (75)

Loc: Sec. 15, (40-42E), Northport dist. Access: ½ mi. from road. Prop: 2 patented claims: Highland Nos. 1 and 2. Owner: Charles Maki and R. Gezelius, Northport, Wash. (1941). Ore: Lead, zinc, silver, gold. Deposit: Quartz vein said to be 20 to 25 ft. wide and traceable for 1,400 ft. on the surface. Dev: 40-ft. shaft, 25-ft. shaft, 15-ft. adit. Ref: 30, p. 103.

#### Highland Chief

Loc: At head of Oropathan Cr., Cedar Canyon dist. Ore: Silver, copper. Ref: 63, p. 115.

#### Homebuilder (31)

Loc: Sec. 9, (39-38E), Orient dist. Access: Near road. Prop: 3 unpatented claims. Owner: Louis Larson, Northport, Wash. (1941). Ore: Lead, silver. Deposit: Mineralized quartz vein 4 to 12 in. wide. Dev: 100 ft. of work in an adit and a shaft. Ref: 30, p. 136.

#### Homestake (28)

(see under gold)

#### Honest John (191)

(see under silver)

#### Hoodoo (206)

(see under silver)

#### Hubbard (Royal Gold) (34)

Loc: E½ sec. 32, (40-39E), on top of peak at head of Squaw Cr. Elev: 4,000 ft. Access: 10 mi. W. of railroad at Northport on Forest Service road. Prop: 5 unpatented claims. Owner: Mines Management, Inc. (1949). Hubbard Mining Corp., Colville, Wash. (1945). Bruder Mining Co. Ore: Lead, zinc, silver, gold, copper. Ore min: Galena, sphalerite, tetrahedrite, pyrite, chalcopryrite. Deposit: Sulfides concentrated in small bunches in quartz vein from 10 to 12 ft. wide in phyllite. Vein has been traced 1,500 ft. Dev: 275-ft. and 125-ft. adits, 2 shafts about 30 ft. deep. Prod: Reportedly 1 carload of ore shipped. Ref: p. 107. 104, 6/30/37. 108, 4/49, p. 51. 111, p. 8.

#### Hunter

(see Jackson under zinc)

#### Ibex (53)

Loc: Sec. 7, (37-40E), N. of divide between Onion and Clugston Creeks, Northport dist. Elev: 4,700 ft. Access: Road. Prop: 4 unpatented claims. Owner: Abandoned (1941). Ore: Lead, silver. Ore min: Galena, said to be argentiferous. Deposit: 4-ft. quartz vein in limestone and argillite. Dev: 8-ft. shaft and another shallow shaft. Ref: 30, pp. 112-113. 116, p. 244.

**Indian**  
(see Eureka under gold)

**on Cap**  
(see Ham)

**on Mask (14)**  
(see under zinc)

**oquois (84)**  
(see under zinc)

**ackson (80)**  
(see under zinc)

**y Dee (179)**  
(see under silver)

**y Gould (182)**  
(see under silver)

**yhawker (19)**  
(see under copper)

**e Creek (125)**  
(see under zinc)

**hn Day (178)**  
(see under silver)

**hn Hays (163)**  
(see under silver)

**hunny Boy**  
(see Moonshine-Johnny Boy under silver)

**upiter**  
(see Last Chance)

**st Time (Star) (76)**  
**Loc:** W. center sec. 15, (40-42E), Northport dist. **Elev:** 4,000  
**Access:** 1½ mi. from railroad at Boundary. **Prop:** 1 claim,  
own as Just Time or Star. **Owner:** Abandoned (1941). Her-  
man and H. V. Rieper (1924). **Ore:** Lead, zinc, silver. **Ore min:**  
Galena, sphalerite, pyrite. **Gangue:** Quartz, calcite. **Deposit:**  
nestone breccia cemented by quartz and calcite is sparsely  
mineralized. **Dev:** Shaft and other old workings caved (1941).  
**Ref:** 30, p. 111. 46, p. 53. 73, p. 105. 128, p. 62.

**ough (74)**  
**Loc:** NE¼ sec. 14, (40-42E), 1 mi. S. of Frisco Standard  
property. **Owner:** Mr. Keough (1913). **Ore:** Lead, zinc, gold,  
copper. **Ore min:** Galena, sphalerite, tetrahedrite, reportedly  
free gold. **Deposit:** Slightly mineralized quartz lenses in dolo-  
mite near its contact with shale. **Dev:** Open cuts. **Ref:** 7, p. 59.

**ttle River**  
(see Galena Hill)

**ystone (98)**  
(see under iron)

**ng Tut**  
**Loc:** Northport dist. **Ore:** Lead, zinc. **Prod:** Small ship-  
ment in 1926. **Ref:** 97, 1926, p. 470.

**yotte**  
(see Rightside under copper)

**ug (170)**  
(see under copper)

**ke View**  
(see Hazel under silver)

**keview**  
(see Roosevelt under silver)

### Last Chance (Jupiter) (61)

**Loc:** SW¼SE¼ sec. 24, (39-40E), on E. side of Deep Cr.,  
Northport dist. **Elev:** 2,690 ft. **Access:** 5 mi. by road from  
railroad at Northport. **Prop:** 3 patented claims and a millsite.  
**Owner:** Last Chance Consolidated Mines, Inc., Spokane, Wash.  
(1948—). Jupiter Lead Co. (1907-1926). Norman Mines Co.  
(1915-1916). **Ore:** Lead, zinc, silver. **Ore min:** Galena, cerussite,  
anglesite, sphalerite, pyrite, limonite. **Gangue:** Calcite, quartz.  
**Deposit:** Ore shoots in a mineralized shear zone in dolomite,  
especially at fracture intersections. Zone up to 5 ft. wide. **Dev:**  
4 adits and several open cuts and trenches total more than  
1,000 ft. **Improv:** 60-ton gravity-flotation mill (1950). **Assays:**  
Galena ore said to have av. 55% Pb without concentration.  
Low Zn values and only 1 oz. Ag per ton. **Prod:** \$600,000 up to  
1937. 1 carload ore 1938. Small shipments of conc. 1947-1949.  
**Ref:** 7, pp. 54-56. 30, pp. 107-108. 46, pp. 88-90. 73, pp. 106-107.  
97, 1905-1911, 1916, 1926. 98, 1918-1926. 108, 7/40, p. 34. 112,  
p. 185. 113, 6/3/37, p. 7. 130, p. 91. 133, p. 36. 158. 164, pp.  
309-310.

### Lead King (100)

**Loc:** Secs. 12 and 13, (39-41E), just S. of Lead Trust mine,  
Northport dist. **Elev:** 3,200 ft. **Access:** ¼ mi. from road. **Prop:**  
3 claims: Lead King, Rex Nos. 1 and 2. **Owner:** Elmer Godfrey,  
Northport, Wash. (1941). **Ore:** Lead, zinc, silver. **Ore min:**  
Galena, sphalerite, limonite, cerussite. **Gangue:** Aragonite, dolo-  
mite, gouge. **Deposit:** Galena and sphalerite occur as irregular  
replacement bodies in dolomite. A tight fracture cut by the  
adit varies from a few in. to 2 ft. in width and carries con-  
siderable galena. **Dev:** 326-ft. adit, open cuts. **Ref:** 30, pp.  
102-103. 73, p. 96. 129, pp. 106-107. 158.

### Lead Trust (93)

**Loc:** Sec. 7, (39-42E) and sec. 12, (39-41E). **Elev:** 3,000 ft.  
**Access:** 2½ mi. by road from Leadpoint. 14 mi. by road to  
railroad at Northport. **Prop:** 4 claims and 20 acres of deeded  
land. **Owner:** Ray Cater, Marlin, Wash., leasing to Felix J.  
Cardinal, Spokane, Wash. (1951-1954). Lead Trust Mining  
Co. (1910-1915). Lead Trust Mine, Inc. (1922-1926). **Ore:**  
Lead. **Ore min:** Galena, limonite, cerussite. **Gangue:** Dolomite,  
siderite. **Deposit:** Ore occurs as irregular bunches in brecciated  
limestone. Ore body in lower adit was from 16 to 24 in. wide.  
**Dev:** Glory hole, 216-ft. adit, 500-ft. adit, and 3 other adits  
comprise 2,000 ft. of workings. **Prod:** 1939. Occasional ship-  
ments prior to 1924 are said to have amounted to 30,000 tons  
of lead ore. **Ref:** 30, pp. 93-94. 73, pp. 94-96. 97, 1917, 1923,  
1925, 1926, 1930, 1940. 98, 1920-1926. 129, pp. 104-106. 158,  
p. 36. 141, p. 22.

### Leadhill

**Loc:** T. 40 N., R. 42 E., Northport dist. **Owner:** Chas. Bos-  
trom and Ivar W. Luhr. **Ore:** Lead. **Prod:** Has produced. **Ref:**  
58, p. 38.

### Leadville (137)

**Loc:** Secs. 3 and 10, (37-39E), Clugston Cr. area. **Access:**  
Road. **Prop:** 3 claims. **Owner:** Lead Trust Mines, Inc., Spokane,  
Wash. (1955—). **Ore:** Lead, silver. **Deposit:** Surface show-  
ings of lead and zinc high on mountain were not encountered  
in long adit. **Dev:** 1,250-ft. crosscut. **Ref:** 30, p. 80. 158.

### Legal Tender (203)

(see under silver)

### Leon C. (102)

**Loc:** Secs. 7 and 18, (39-42E) and secs. 12 and 13, (39-  
41E), Northport dist. **Access:** 14 mi. by road from railroad at  
Boundary. **Owner:** Wm. McCue. **Ore:** Lead. **Ref:** 158.

65 ft., width of 1 to 3 ft., and depth of 35 ft. Dev: 40-ft. inclined shaft, 200-ft. crosscut and drift, trenches. Ref: 133. p. 37. 157.

### Middleport (121)

(see under zinc)

### Mineral Belt (47)

Loc: Sec. 35, (40-39E), Northport dist. Elev: 2,450 ft. Prop: Several claims. Owner: Abandoned (1941). Ore: Lead, silver. Ore min: Galena. Gangue: Quartz. Deposit: A little galena occurs in a 2- to 6-in. mineralized zone parallel to the lamination of argillite. Lamprophyre forms the footwall. Dev: 240-ft. adit, shaft. Ref: 30, p. 113. 164, p. 313.

### Mineral Hill

(see Aichan Bee under silver)

### Monarch (140)

Loc: Secs. 3 and 10, (37-39E), 12 mi. N. of Colville. Ore: Lead. Ref: 158.

### Monday Morning (117)

(see also Morning under silver)

Note: Probably this is the same as the Morning property. Loc: Sec. 4, (37-41E), near head of Deep Cr. Elev: 2,900 ft. Ore: Lead, silver. Ore min: Galena. Deposit: Quartz vein from 2 in. to 4 ft. wide along bedding planes of schist. Galena occurs in both the quartz and schist. Dev: Open cuts, 72-ft. adit. Ref: 58, p. 45. 164, pp. 176-177.

### Montana and Washington (7)

(see under copper)

### Montgomery (187)

(see under copper)

### Monumental

(see Treadwell)

### Moonlite

(see Morning under silver)

### Moonshine-Johnny Boy (209)

(see under silver)

### Morning (116)

(see under silver)

### Mountain View (48)

(see under silver)

### Mountain View Extension (49)

(see under silver)

### Mullen (185)

Loc: W½NW¼ sec. 16, (32-41E), 3 mi. E. of Chewelah. Elev: 2,900 ft. Access: Road. Prop: State lease. Owner: Elmer J. Mullen, Chewelah, Wash. (1952). Ore: Lead, silver, zinc, antimony, gold, copper. Ore min: Pyrite, sphalerite, tetrahedrite, zinkenite, meneghinite, galena, chalcopyrite, malachite. Deposit: Mineralized quartz vein 3 to 4 ft. wide and traceable for 150 ft. on the surface occurs along the contact of granodiorite and quartzite. Mineralized portion of the vein is 1½ to 2 ft. wide. Dev: 17-ft. shaft. Assays: A sample of high-grade showed 33.8% Pb, 21.6 oz. Ag, 0.56 oz. Au, 9.7% Zn, 1.0% Cu, 5.6% Sb, 0.14% As. Ref: 132, pp. 142-143. 133, p. 37.

### Myeerah (71)

Loc: E. center sec. 11, (40-42E), across the gulch W. of Frisco Standard mine. Access: Road. Prop: 4 unpatented claims. Owner: Jury Robinson, Northport, Wash., lessee (1949). Ore: Lead, zinc, silver, gold. Ore min: Galena, tetrahedrite. Deposit: Vein 2 ft. wide consisting of quartz and sheared slate, cuts black slate. Numerous lamprophyre dikes. Vein traceable

for about 1,000 ft. Dev: 475 ft. of adits, numerous open cuts. Assays: Shipments returned 27% Pb, 13 oz. Ag. Prod: 1926. Ref: 30, p. 98. 68, p. 14. 97, 1926, p. 470. 128, p. 62. 158.

### Myrtle

Loc: Bossburg dist. Ore: Lead, silver, gold. Ref: 13, p. 127.

### Nabob

(see Fred B.)

### Neglected (135)

Loc: Secs. 10 and 11, (37-39E), on high spur between 2 branches of Clugston Cr. Access: ½ mi. from road. Prop: 4 claims: Pine Tree, Maty, New Discovery, Neglected No. 1. Owner: Joe Day (1941). Ore: Lead, zinc. Deposit: Country rock of argillite and limestone is cut by a mineralized quartz-calcite vein about 8 ft. wide. Dev: 150-ft. adit, 100-ft. shaft, 25-ft. shaft, several open cuts, shafts, and short adits. Prod: 1917, 1925, 1928. Ref: 30, p. 83. 97, 1917, 1925, 1928. 164, p. 241.

### Nevada (168)

Loc: SW¼ sec. 23, (32-39E), Chewelah dist. Elev: 3,400 ft. Access: 5 mi. by road and 1 mi. by trail SW. of Blue Cr. Prop: 40 acres of deeded land. Owner: Nevada Syndicate Mining Co., Chewelah, Wash. Ore: Lead, zinc, silver, copper. Ore min: Galena, sphalerite, tetrahedrite, chalcopyrite, pyrite. Gangue: Quartz, actinolite, epidote. Deposit: Ore minerals form pockets replacing limestone. The pockets range from a few inches to a foot or more in dia. Dev: 30-ft. shaft and 2 other shallow shafts. Assays: Ore reported to carry Ag. Prod: Carload of ore hauled to siding in 1903. Ref: 7, p. 111. 30, p. 37. 46, pp. 97-98. 97, 1925, p. 562. 100, 1903, pp. 83-84. 164, pp. 169-170.

### New England (63)

(see under zinc)

### New Leadville (Yo Tambien) (141)

Loc: SE¼ sec. 3, (37-39E), Bossburg dist. Elev: 3,000 to 3,800 ft. Access: 12 mi. by road from railroad at Colville. Prop: 10 claims: Bye-Joe, Una, Monarch, Blue Bell, Surprise, Aspen, Botts, Tamarack, R. J. Owner: Sunrise Mining Co. (1941). New Leadville Mines Co. (1924-1927). Eureka Surprise Mining Co. (1928). Ore: Lead. Ore min: Galena, cerussite, wulfenite, limonite. Gangue: Calcite, siderite, quartz. Deposit: Ore minerals occur in a brecciated zone in colomitic limestone. The ore body is irregular and buncy. Much of it has been stoped. Prod: Produced prior to 1924. Ref: 46, pp. 73-75. 73, pp. 115-116.

### Newland

(see Longshot)

### Newport (Eagle-Newport)

(see Aguila)

### Niles (183)

Loc: Sec. 8, (32-41E), Chewelah dist. Owner: O. C. Niles, Chewelah, Wash. Ore: Lead, silver. Ref: 158.

### Noble Four

(see under copper)

### Norman King

Loc: Colville dist. Ore: Lead, silver. Prod: 1908. Ref: 97, 1908, p. 580.

### North Monitor (197)

(see under silver)

### Northern Light (50)

Loc: NE¼SE¼ sec. 5 and NW¼SW¼ sec. 4, (39-40E), adjoining Silver Crown property on the N., on the outskirts

limonite. Gangue: Clay, altered limestone, quartz, siderite. Deposit: Chimneys of lead ore along fracture intersections in limestone. Dev: 80-ft. shaft, 20-ft. shaft open cuts. Assays: Ore from a 50-ft. shaft on Red Iron No. 1 claim said to assay 7% Pb. Ref: 30, p. 99. 73, pp. 96-97. 164, pp. 308-309.

**Red Top (90)**

(see also Anaconda, Copper King)

Loc: NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 25, (40-41E), Northport dist. Elev: 3,100 ft. Access: 18 mi. by road from railroad at Northport. 1 $\frac{1}{2}$  mi. of good truck road connects the property with the Leadpoint-Northport road 4 mi. from Leadpoint. Prop: 5 patented and 3 unpatented claims, including the Anaconda. Owner: Pacific Northwest Mining Co., Bremerton, Wash. (1952-1954). Red Top Mining Co., Spokane, Wash. (1924-1952). Ore: Lead, zinc, silver, tungsten. Ore min: Galena, sphalerite, chalcopryrite, pyrite, scheelite. Gangue: Quartz. Deposit: Mineralized shear zones in marble and argillite crisscrossed by quartz veins. Some ore shoots as much as 4 ft. wide and 18 ft. long. Dev: 2,700-ft. adit; some 1,500 ft. of drifts, raises, and winzes have been opened off the adit. Improv: Several buildings in good condition. Assays: High-grade sample showed 36% Pb, 18% Zn, 18 oz. Ag. One zone carried 2% to 4% scheelite. Prod: Small shipments of lead-silver-zinc ore 1938, 1944, 1953. 4 shipments prior to 1939 totaled about 200 tons of ore. Ref: 30, pp. 89, 100-101. 37, pp. 59-61. 46, pp. 69-70. 97, 1928, p. 703; 1939, p. 491; 1945. 98, 1922, p. 1683; 1925, p. 1829. 104, 8/15/32, p. 29. 106, 8/4/32; 9/7/33. 150, p. 38. 158.

**Redwood (181)**

(see under silver)

**Rightside (152)**

(see under copper)

**Rinchaw**

(see Middleport under zinc)

**Riverview (43)**

Loc: SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 30, (40-40E), Northport dist. Owner: John A. Peterson and William Parrott, lessees, Colville, Wash. (1952). Ore: Lead, zinc, silver. Ref: 133, p. 33.

**Robena**

(see Young America under zinc)

**Rockcut (3)**

Loc: Secs. 23 and 26, (40-36E), Orient dist. Access: Road. Prop: Several unpatented claims. Owner: W. S. Bliss, Orient, Wash. (1941). Ore: Lead, silver, zinc. Deposit: Quartz vein which varies from a few in. to 5 ft. in width. Said to be 5,000 tons of ore blocked out. Dev: 700 ft. of shaft with some drifting. Assays: Ore blocked out said to run \$6 to \$22 per ton. Ref: 30, p. 135.

**Rocky Creek**

(see Burrus under zinc)

**Roosevelt (69)**

(see under silver)

**Rosebud (164)**

Loc: Sec. 22, (34-37E), Summit dist. Access: Near road. Prop: 3 unpatented claims. Owner: Abandoned (1941). Ore: Lead, silver. Deposit: Small stringers of quartz 1 in. and less in width. Dev: Small shaft and surface cuts, caved (1941). Ref: 30, p. 65.

**Royal**

(see Big Chief)

**Royal Gold**

(see Hubbard)

**S. L.**

(see under tungsten)

**St. Crispin (41)**

(see under gold)

**Sandiego (199)**

(see under silver)

**Santa Rita**

(see Cleveland)

**Saratoga**

(see under gold)

**Saturday Night-Sunday Morning (212)**

Loc: Sec. 11, (29-37E), Deer Trail dist. Elev: 3,600 ft. Access: Poor road. Prop: 2 claims. Owner: Mr. Stiles, Fruitland, Wash. (1941). Plata Fino Mining Co. (1918-1920). Ore: Lead, silver, zinc, copper. Ore min: Galena, sphalerite, tetrahedrite, malachite, limonite. Gangue: Quartz, barite. Deposit: Ore minerals occur in small patches along fracture zones in limestone and argillite. Main vein is about 18 in. wide. Dev: About 800 ft. of workings in several adits and shafts, mostly caved. Assays: 2 tons from 50-ft. level from shaft shipped prior to 1897 returned 71 oz. Ag at smelter. Prod: Small amount. Ref: 7, p. 116. 30, p. 73. 63, p. 115. 112, p. 197. 164, pp. 191-192.

**Sauvola**

(see Blue Lime)

**Scaman (83)**

Loc: Sec. 19, (40-42E), on Red Top Mtn., Northport dist. Elev: 2,850 to 2,925 ft. Access: 6 mi. by road to railroad at Boundary. Prop: 4 claims and 1 fraction. Owner: Fred Scaman & Bros., Wenatchee, Wash. (1920). Ore: Lead. Ore min: Galena, cerussite. Deposit: Ore found as pockets in limestone near a dike. Width of ore zone about 3 ft. Dev: 340-ft. adit, 240-ft. adit with some drifting. Prod: 65 tons from upper adit prior to 1920. Ref: 7, p. 57. 164, pp. 297-298.

**Scandia (56)**

(see under zinc)

**Schenk**

(see Rightside under copper)

**Seal**

(see Queen under silver)

**Shoemaker (123)**

(see under zinc)

**Short Wait (54)**

Loc: Sec. 17, (39-39E), on W. side of Columbia R. Access: 1 mi. from highway. Prop: 5 unpatented claims. Owner: George McGowan, Northport, Wash. (1941). Ore: Lead, zinc, silver, gold, copper, molybdenum. Deposit: Small pockets of ore along a fracture zone. Dev: 20-ft. shaft, 18-ft. adit. Ref: 30, pp. 94-95. 158.

**Sierra Zinc (114)**

(see under zinc)

**Silver Basin**

(see Queen under silver)

**Silver Crest**

(see under silver)

**Silver Crown (51)**

Loc: NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 5 and NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 4, (39-40E), on outskirts of town of Northport. Elev: Workings at 2,100 to 2,300 ft. Access: Within 500 ft. of railroad. Prop: 1 patented claim: Silver Crown. Owner: Mrs. W. H. Smiley, Spokane,

Wash. (1944). Hughes estate (1941). Ore: Lead, silver, zinc. Ore min: Cerussite, lead oxide, sphalerite, smithsonite. Deposit: Ore is in quartz fissure veins along faults in limestone. The veins are less than 2 ft. wide and generally are only 2 or 3 in. They are mineralized for a few yd. laterally and vertically, as exposed on the surface and in shafts. Dev: 60-ft. shaft, 130-ft. adit with 73 ft. of crosscuts, 100-ft. adit. Assays: Best showing 2 to 5 ft. wide and 100 ft. long est. to contain 1% to 2% Pb, 2% to 3% Zn. Prod: Reportedly 2 cars of ore shipped. Ref: 12, p. 74. 13, p. 120. 30, p. 104. 97, 1925, p. 561; 1926, p. 470. 100, vol. 10, 1902, p. 49. 158.

#### Silver Key

(see Big Chief)

#### Silver King

Loc: 4½ mi. SE. of Northport. Prop: 4 claims. Owner: Silver King Mining Co. (1902). Ore: Lead, silver. Deposit: Several veins of lead-silver ore. Dev: 3 shafts, 30 ft., 28 ft., and 20 ft. in depth. Assays: Some assays of solid ore yielded 77% Pb, 6 oz. Ag. Ref: 88, p. 6.

#### Silver Mountain

(see Daisy-Tempest under silver)

#### Silver Queen (Ark)

(see Ark under silver)

#### Silver Queen (Queen)

(see Queen under silver)

#### Silver Seal

(see Queen under silver)

#### Silver Summit (Summit) (167)

Loc: Near center sec. 33, (33-38E), Chewelah dist. Access: Road. Prop: 2 patented claims. Owner: Mrs. A. J. Moore, Seattle, Wash. (1941). Silver Summit Mining Co. (1923-1926). Ore: Lead, silver, copper. Ore min: Galena, anglesite. Gangue: Quartz. Deposit: 3-ft. vein cutting trachite. Dev: 2 shafts, one a 300-ft. incline from which 300-ft. and 40-ft. drifts have been driven. Assays: 20% to 41.30% Pb, 15 to 63 oz. Ag. Prod: Some rich silver ore packed out in the 1880's. Ref: 12, p. 26. 30, pp. 38-39. 63, p. 113. 97, 1923, p. 414. 98, 1925, p. 1832; 1926, p. 1595. 117, no. 1, 1922, p. 41. 141, p. 22.

#### Silver Trail (Clugston, Dead Medicine) (146)

Loc: N. part sec. 33, (38-39E), near head of E. branch of Bruce Cr. Elev: 3,025 ft. Access: 8 mi. by road to railroad at Bossburg. Prop: 2 patented and 4 unpatented claims. Owner: Silver Trail Mining Co. (1912-1952). Leased by Robert Ramser, Spokane, and A. B. Sylvester, Evans, Wash. (1951-1952). John Keough (1887-1889). I. N. Peyton (1889). Ore: Lead, silver, zinc, cadmium. Ore min: Galena, sphalerite, chalcopryrite. Deposit: Quartz vein 1½ to 8 ft. wide in argillite and quartzite is parallel to and within 600 ft. of granite contact. Dev: 850-ft. lower adit, 320-ft. upper adit from which the ore was shipped. Total about 2,000 ft. Improv: Bunkers (1952). Assays: 5,000 tons of ore av. 7 oz. Ag, 1½% Pb. A carload assayed 54.5 oz. Ag, 14.1% Pb, 9.5% Zn, 16% S, 11% Fe, 1.7% CaO, no Au. Prod: \$122,000 prior to 1928. 1938, 1939, 1941, 1950, 1951. Ref: 12, p. 82. 13, pp. 127-128. 30, p. 84. 46, pp. 57-59. 97, 1912, 1925, 1939, 1940. 98, 1918-1926. 104, 4/15/28, p. 56; 2/15/34, p. 20; 6/15/35, p. 27. 106, 5/1/30, p. 20. 108, 4/15/52, p. 85. 112, p. 203. 133, p. 39. 164, pp. 246-248.

#### Silver Wave

Loc: Bossburg dist. Ore: Lead, silver. Ref: 13, p. 127.

#### Smoky Bullion

(see A and C under copper)

#### Snyder and Baxter

(see under silver)

#### Squire

Loc: Summit dist., 18 mi. W. of Chewelah. Access: Road from Chewelah. Prop: 4 claims, including the Summit and Blanche. Owner: J. N. Squire (1890). Ore: Lead, silver, copper. Ore min: Galena, anglesite, chalcocite. Gangue: Quartz. Deposit: 2 veins, one 3 ft. wide carries lead and silver, another 2 ft. wide carries copper and silver. Dev: 300-ft. shaft, 50-ft. incline. Assays: High-grade from Summit claim assayed 50 oz. Ag, 45% Pb. Lesser grade assayed 15 oz. Ag, 20% Pb. Ore from Blanche claim assayed 100 to 400 oz. Ag, 8% to 10% Cu. Ref: 12, pp. 76-77. 13, pp. 122-123.

#### Star

(see Just Time)

#### Steel Galena

(see Ham)

#### Stemwinder (11)

(see under copper)

#### Sterrett (44)

Loc: Sec. 33, (40-40E), Northport dist. Access: Near road. Prop: 10 acres of deeded land. Owner: Ray Evans, Northport, Wash. (1941). Ore: Lead, silver, zinc, gold. Deposit: Vein which varies in width from nothing to 3 ft. Dev: 500 ft. of work in drifts, raises, and stopes. Assays: 5,870-lb. shipment assayed 56.2% Pb, 3% Zn, 34.2 oz. Ag, 0.013 oz. Au. Prod: 5,870 lb. shipped prior to 1941. Ref: 30, p. 100.

#### Stone

(see New England under zinc)

#### Stonewall-Sunnyside (55)

Loc: Secs. 16 and 22, (39-40E), Northport dist. Access: 1 mi. by trail from road. Prop: 3 unpatented claims. Owner: Henry Evjin, Northport, Wash. (1941). Ore: Lead, zinc, silver. Deposit: Vein said to av. 3 ft. in width occurs along the contact of granite and argillite. Dev: 75-ft. shaft and 300-ft. crosscut. Ref: 30, p. 95.

#### W. B. Stuart

(see John Day under silver)

#### Sugar Loaf

(see Vanasse under silver)

#### Summit

(see Silver Summit)

#### Sunday Morning

(see Saturday Night-Sunday Morning)

#### Sunnyside

(see Stonewall-Sunnyside)

#### Sunset (42)

Loc: SW¼ sec. 30, (40-40E), ½ mi. N. of Northport, 300 ft. W. of Columbia R. Elev: 1,350 ft. Prop: 20 acres of deeded land. Owner: Mr. Gourley and associates, Wenatchee, Wash. (1941). Ore: Lead, silver, gold, zinc, copper. Ore min: Galena, sphalerite, pyrite, tetrahedrite, chalcopryrite, much pyrrhotite. Gangue: Quartz. Deposit: Mineralization along contact of ker-santite dikes with limestone and shale. Vein varies from a few inches to several feet in width. Dev: 400-ft. inclined shaft from which short drifts were driven at 100-ft. intervals. Assays: \$2.00 to \$62.00 Au, 3.0 to 38.9 oz. Ag, 9.0% to 75.0% Pb. Ref: 7, pp. 59-60. 116, no. 2, 1908, pp. 37-38. 164, p. 316.

#### Superior Copper (169)

(see under copper)



- Double Eagle (218)**  
(see under lead)
- Double Standard (57)**  
(see under copper)
- Douglas**  
(see under tungsten)
- Douglas Hunter**  
(see under gold)
- E. M. C. (156)**  
(see under lead)
- Eagle (Blue Star, Redwood, Chewelah Eagle) (203)**  
(see also Redwood)  
**Loc:** Near center N½ sec. 5, (32-41E) and sec. 32, (33-41E). **Elev:** 3,000 ft. **Access:** 4½ mi. by road NE. of Chewelah. **Prop:** 1 patented, 7 unpatented claims, and some deeded land. **Owner:** Chewelah Eagle Mining Co. (1949-1951). Eagle Gold Mining Co. (1908). Blue Star Mining Co. (1911-1926). **Ore:** Silver, lead, copper, zinc, gold, molybdenum. **Ore min:** Galena, tetrahedrite, sphalerite, chalcopryrite, pyrite, pyrrhotite, cerussite, anglesite, malachite, azurite, molybdenite. **Gangue:** Quartz. **Deposit:** Irregular lenses and replacements in dolomitic limestone near granite contact. Ore bodies from a few in. to 3 or 4 ft. wide and a few ft. to 50 ft. or more long. **Dev:** Main level with more than 3,000 ft. of crosscuts and drifts. Shaft 217 ft. deep. **Prod:** Prior to and during 1890, 1911, 1925. Production to 1925 was \$150,000. **Ref:** 7, pp. 105-106. 12, pp. 26, 75. 13, p. 121. 30, p. 32. 63, p. 113. 68, pp. 7, 21. 97, 1912, p. 923; 1926, p. 469. 98, 1922-1926. 114, no. 5, 1909, p. 57. 150, p. 29. 158, 164, pp. 148-149.
- Eagle-Newport**  
(see Aguila under lead)
- Easter Sunday (53)**  
(see under gold)
- Easy Money**  
(see Magma under zinc)
- Echo (123)**  
(see under zinc)
- Edna (216)**  
(see under copper)
- Eldorado (102)**  
(see under lead)
- Eldorado (Magma)**  
(see Magma under zinc)
- Electric Point (86)**  
(see under lead)
- Enterprise**  
(see under gold)
- Enterprise**  
(see Jay Dee)
- Esther Hilbert**  
**Loc:** Deer Trail dist. **Ore:** Silver. **Ref:** 63, p. 115.
- Eureka (3)**  
(see under gold)
- Eureka (Uncle Sam)**  
(see Uncle Sam under lead)
- Eureka and Orient**  
(see Eureka under gold)
- Examiner**  
(see under gold)
- Excelsior**  
(see under lead)
- Express**  
(see St. Paul-Express under copper)
- F. H. and C. (6)**  
(see under gold)
- Faith**  
(see F. H. and C. under gold)
- Farmer (84)**  
(see under zinc)
- Finley**  
(see under lead)
- First Thought (26)**  
(see under gold)
- Fish (157)**  
**Loc:** Sec. 24. (35-37E). **Owner:** John Marty, Kettle Falls, Wash. (1941). **Ore:** Silver, lead, copper. **Dev:** 250-ft. adit, 60-ft. shaft, 80-ft. crosscut. **Ref:** 158.
- Fissure (10)**  
(see under gold)
- Flannigan**  
(see Iroquois under zinc)
- Fred B. (206)**  
(see under lead)
- Frisco Standard (108)**  
**Loc:** S½NW¼ sec. 12, (40-42E), on Jubilee Cr., just S. of international boundary. **Elev:** 3,700 ft. **Access:** 14 mi. by road from railroad at Boundary. 18 mi. by road from railroad at Metaline Falls. **Prop:** 9 claims, of which 7 are patented: H. R. H. Big Strike, Frisco, Buffalo, Standard, Syndicate, Boulder. **Owner:** Northport Operating Co., Olympia, Wash. (1953—). Frisco Standard Mining Co. (1905-1953). Northport Mining & Development Co., Inc., Olympia, Wash. (1951). **Ore:** Silver, lead, copper, zinc, gold. **Ore min:** Galena, tetrahedrite, chalcopryrite, sphalerite, pyrrargyrite, cerargyrite, bromyrite, azurite, malachite, stannite. **Deposit:** Quartz veins or lenses up to 7 ft. wide in sheared graphitic schist. Veins occur along the planes of schistosity. One vein varies from a few inches to 6 ft. in width. **Dev:** 1,000 ft. of accessible workings and several caved adits. **Improv:** Cookhouse and cabin (1951). **Assay:** Sample across 5-ft. width in lower adit showed 1.00% Zn, 0.10% Pb, 0.23% Cu, 3.35 oz. Ag. 3 small shipments showed 49.2 to 72.8 oz. Ag, 7% to 16.8% Pb, 2.7% to 4.6% Cu, tr. to 0.01 oz. Au. **Prod:** Small, intermittent. **Ref:** 7, pp. 58-59. 30, p. 95. 72, p. 104. 97, 1905, p. 337; 1908, p. 581. 98, 1922-1926. 112, p. 172. 128, pp. 61-62. 129, pp. 112-114. 150, p. 37. 157. 158. 164, p. 304.
- Galena Farm (130)**  
(see under lead)
- Galena Hill (20)**  
(see under lead)
- Galena Knob (127A)**  
(see under lead)
- Galena Ridge**  
(see Galena Farm under lead)
- Georgic (36)**  
(see under copper)
- Germania (234)**  
(see under tungsten)

**Little Frank (235)**  
(see under lead)**Little Gem**

Loc: 3 mi. NW. of Pierre Lk., Orient dist. Prop: 4 claims. Owner: Lincoln Mining & Development Co. (1897). Ore: Silver, gold, copper. Dev: 75-ft. shaft. Assays: 34 oz. Ag, \$3.60 Au, 5% Cu. Ref: 158.

**Little Giant (7)**

(see under lead)

**Lone Star (64)**

Loc: Sec. 35, (40-39E), Northport dist. Access: ½ mi. from road. Prop: 150 acres of patented land. Owner: T. T. Richardson, Northport, Wash. (1941). Ore: Silver, lead, zinc, gold. Deposit: Quartz vein av. 12 to 14 ft. in width has been traced for 1,300 ft. on the surface. Dev: 75-ft. inclined shaft. Prod: Reportedly shipped to Northport smelter. Ref: 30, p. 102.

**Longshot (141)**

(see under lead)

**Loon Lake Copper (210)**

(see under copper)

**Lottie (43)**

(see under copper)

**Lucile (98)**

(see under zinc)

**Lucky Boy (128)**

(see under lead)

**Lucky Boy (Turk)**

(see Turk under copper)

**Lucky Charlie (16)**

(see under copper)

**Lucky Four (89)**

(see also Electric Point)

Loc: Sec. 18, (39-42E), Northport dist. Prop: Part of Electric Point property. Ore: Silver, copper, lead, gold. Assays: 1 truck-load shipped in 1934 carried 353 oz. Ag, 1.6% Cu, 1.7% Pb, 0.023 oz. Au. Prod: 1934. Ref: 99, 12/18/34. 106, 11/34, p. 12.

**Lucky Stone (122)**

(see under lead)

**M. and C.**

(see U. S. Copper Gold)

**McAdoo (196)**

(see under gold)

**McDonald**

(see Keystone under iron)

**McKinley (4)**

(see under gold)

**McKinley (39)**

(see under lead)

**McNally (49)**

(see under copper)

**Magma (133)**

(see under zinc)

**Maple Leaf**

(see Melrose)

**Margarete (1)**

(see under lead)

**Maryland**

(see Bonanza Copper under copper)

**Melrose (Paragon, Maple Leaf) (92)**

Loc: Sec. 28, (40-41E), 4 mi. S. of the town of Boundary. Elev: 3,000 ft. Access: 1½ mi. SE. of the Northport-Boundary highway by truck road. 4 mi. to railroad at Boundary. Prop: 3 unpatented claims. Owner: Ben Hofer, Northport, Wash. (1941). Paragon Mining & Development Co. (1915). Melrose Mining Co. (1918-1938). Ore: Silver, lead, zinc, copper. Ore min: Tetrahedrite, galena, sphalerite, pyrite. Gangue: Quartz. Deposit: 6-ft. vein in argillite contains irregular scattered bunches of ore. Dev: 1,600 ft. of underground work on 2 levels. Assays: 75 tons shipped prior to 1921 returned a gross value of \$8,000 in Ag. A 3-ton shipment returned 17.5% Zn, 8% Pb, 2.6% Cu, 1.01% Bi, 1.7% Sb, 73.2 oz. Ag. Prod: 1913, 1937, 1938. Ref: 30, p. 101. 97, 1913, p. 801; 1938, p. 460; 1939, p. 491. 98, 1920-1926. 99, 2/12/35. 104, 6/15/34, p. 29; 1/30/35, p. 23. 106, 6/16/32, 7/6/33. 112, p. 190. 129, pp. 116-117. 141, p. 22.

**Mexico**

(see Queen)

**Michigan (27)**

(see under gold)

**Michigan Boy (142)**

(see under lead)

**Middleport (140)**

(see under zinc)

**Mineral Belt (65)**

(see under lead)

**Mineral Hill**

(see Aichan Bee)

**Minnehaha (191)**

(see under copper)

**Minorca (44)**

(see under copper)

**Mint**

(see under copper)

**Monahan (226)**

(see under copper)

**Monday Morning (135)**

(see under lead)

**Montana and Washington (8)**

(see under copper)

**Montgomery (201)**

(see under copper)

**Moonlite**

(see Morning)

**Moonshine-Johnny Boy (239)**

Loc: Sec. 11, (29-37E), Deer Trail dist. Access: Near road. Prop: 2 unpatented claims. Owner: Barton Brothers, Chico, Calif. (1941). Ore: Silver, lead. Deposit: Quartz vein av. about 2 ft. in width. Dev: 400 ft. of adit, raises, and drifts. Also open cuts. Ref: 13, p. 126. 30, p. 69.

**Moore (70)**

(see under gold)

**Morning (Moonlite) (134)**

(see also Monday Morning under lead)

Loc: S½NW¼ sec. 4, (37-41E). Access: 22 mi. by road to railroad at Colville. Prop: 5 unpatented claims. Owner: Moonlite Mining Co. (1949). Ore: Silver, lead, zinc, cadmium, gold, copper. Gangue: Quartz. Deposit: Vein said to be 4½ ft. wide and 1,500 ft. long. Dev: 150-ft. adit and several other small adits and drifts total about 400 ft. of underground work.

**Sunnyside (Stonewall-Sunnyside)**  
(see Stonewall-Sunnyside under lead)

**Sunset (72)**  
(see under lead)

**Superior Copper (214)**  
(see under copper)

**Surprise**  
(see Uncle Sam under lead)

**Swamp King (9)**  
(see under gold)

**Syndicate**  
(see under copper)

**Tempest (168)**  
(see also Daisy-Tempest)  
Loc: Sec. 7, (33-38E), Kettle Falls dist. Prop: 6 claims: Tempest, Master, Crown Point, Great Eastern, Eureka, Wild Rose. Owner: Consolidated Silver Mountain Mines Co., Ltd. (1932-1933). Tempest Mining & Milling Co. (1915-1924). Tempest Consolidated Mines Co. (1924-1926). Ore: Silver, gold, copper, zinc. Ore min: Sphalerite, chalcopryite, pyrite. Gangue: Quartz. Deposit: 2 sparsely mineralized veins 4 and 12 ft. wide in quartzite, argillite, and diorite. Prod: Has produced. Ref: 73, p. 126. 98, 1922, p. 1667; 1925, p. 1835; 1926, p. 1597. 104, 6/30/33, p. 18; 7/30/33, p. 19. 106, 11/17/32. 129, pp. 140-143. 164, pp. 229-231.

**Tenderfoot (Avondale-Dome)**  
(see Avondale-Dome under lead)

**Tenderfoot (Big Chief)**  
(see Big Chief under lead)

**Thomason Queen (180)**  
(see under copper)

**Three Orphans (17)**  
(see under lead)

**Titanic (24)**  
(see under gold)

**Togo (228)**  
(see under copper)

**Tom Moore (11)**  
(see under lead)

**Treadwell**  
(see Iron Mask under zinc)

**Trojan (31)**  
(see under gold)

**Tungsten King (211)**  
(see under tungsten)

**Turk (229)**  
(see under copper)

**Twin Cabins**  
(see Hope and Twin Cabins under copper)

**U. S. Copper Gold (M. and C.) (200)**  
Loc: SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, (32-41E). Elev: 2,550 to 2,650 ft. Access: 4 mi. by road E. of Chewelah. Prop: 2 claims: Expert, Grace. Owner: Elmer Mullen, Chewelah, Wash. (1951). Copper-Gold Mining Co. (1907-1920). Ore: Silver, copper, gold. Ore min: Chalcopryite, pyrite, malachite, azurite, limonite. Deposit: 4-ft. quartz vein cutting metamorphics. Dev: 340-ft. adit, a shorter adit. Assays: Carload of ore shipped in 1917 reported to assay 4% Cu, 20 oz. Ag, \$2.50 Au. Prod: One car in 1917. Ref: 7, p. 107. 30, pp. 37-38. 33, 1907, p. 517. 68, p. 17. 163, p. 161.

**Uncle Sam (38)**  
(see under copper)

**Uncle Sam (Hi Cliff) (119)**  
(see under lead)

**United Copper (188)**  
(see under copper)

**United Silver Copper**  
(see United Copper under copper)

**United Treasure (107)**  
Loc: Near center sec. 11, (40-42E), on E. side of Fish Cr., 1 mi. W. of Frisco Standard property, Russian Cr. area. Elev: 3,450 ft. Access: 11 mi. E. of railroad at Boundary, by Cedar Cr. road. Prop: 4 unpatented claims. Owner: Singlejack Silver Mining Exploration Co., Wm. and Richard Weaver, Spokane, Wash. (1953—). R. O. Reinertson, Seattle, Wash. (1933-1953). Ore: Silver, lead, zinc, copper, gold. Ore min: Tetrahedrite, galena, sphalerite, azurite, malachite, pyrite. Gangue: Quartz, carbonates. Deposit: Irregular vein zone of quartz having a max. width of 4 ft. cuts slates. Thin lamprophyre dike above the vein zone. Dev: 1,000 ft. of shallow adits and cuts and one 800-ft. adit. Assays: Best values in silver. 2 tons of hand-sorted ore av. 117 oz. Ag per ton. Prod: 62 tons in 1917. 2 tons in 1933. 1953. Ref: 30, p. 114. 73, pp. 104-105. 97, 1917, 1918, 1926, 1934. 104, 11/30/32, p. 24. 106, 11/17/32, p. 9. 128, pp. 60-61. 129, pp. 114-116. 158. 164, pp. 303-304.

**Valley Dew**  
(see Titanic under gold)

**Valley View (169)**  
Loc: Sec. 7, (33-38E), 4 mi. E. of Daisy. Ore: Silver. Ref: 158.

**Van Stone (131)**  
(see under zinc)

**Vanasse (Sugar Loaf, Victory) (146)**  
Loc: S $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 10, (36-38E), Kettle Falls dist. Access: 1.3 mi. from U. S. Highway 395 on the Mission road. Prop: 240-acre State lease. Owner: Luther Vanasse, Colville, Wash. (1951—). Ore: Silver, gold, lead, copper, antimony. Ore min: Chalcopryite, tetrahedrite, galena, sphalerite, stibnite, bornite, pyrite. Deposit: Mineralized quartz veins in arkose and quartzite. Veins from 1 to 6 ft. wide. In general, zinc, lead, and copper minerals predominate. Dev: 9 shafts 7 to 20 ft. deep and one 65 ft. deep. Also some bulldozer trenches. Diamond drilling. Assays: Assays on picked samples as high as 14% Pb, 6% Cu, \$4.00 Au, 140 oz. Ag. One 16-in. vein shows about 4% stibnite. Ref: 30, p. 57. 132, p. 145. 133, p. 41.

**Venus**  
(see Deer Trail)

**Victory**  
(see Vanasse)

**Viking (21)**  
(see under copper)

**Vulcan (217)**  
(see under copper)

**Wahkiagin (170)**  
Loc: Sec. 7, (33-38E), Summit dist. Owner: Silver Mountain Mining Co. (1918-1924). Ore: Silver. Ref: 112, p. 203.

**War Eagle (45)**  
(see under gold)

**Washington**  
(see Montana and Washington under copper)

copper, gold, silver. **Ore min:** Magnetite, sphalerite, chalcopryrite, scheelite, hematite, malachite, bornite, chalcocite, azurite, possibly molybdenite. **Gangue:** Quartz, garnet, epidote, calcite, actinolite, fluorite. **Deposit:** Roof pendant of sediments replaced and mineralized by intrusive granite. Appears to be promising zinc property. **Dev:** 350-ft. adit, two shorter adits, 5 shafts, some open cuts. **Assays:** Reportedly \$1.25 to \$90 Cu, Au, Ag. Parts of the rock consist of 25% to 80% magnetite. **Prod:** Reported to have produced. **Ref:** 158.

**Twisp View (12)**  
(see under gold)

**Wasco (75)**  
(see under silver)

**Washington Consolidated**  
(see Mineral Hill under silver)

**West King**  
(see under silver)

**Whitestone (65)**  
(see under gold)

**Wolframite (19)**  
(see under tungsten)

**Yakima (63)**  
(see under copper)

## PEND OREILLE COUNTY

### Ace Ten Spot (78)

**Loc:** Sec. 29, (39-43E), Metaline dist. **Access:** Road. **Prop:** 6 unpatented claims. **Owner:** Abandoned (1941). Formerly Metaline Contact Mines. **Ore:** Zinc, lead. **Deposit:** Small showings in zinc and lead. **Dev:** 200-ft. adit, several open cuts. **Ref:** 29, pp. 39-40.

**Ackerlund (99)**  
(see under copper)

**D. Aldrich**  
(see Lead King under lead)

**American Zinc, Lead and Smelting Co.**  
(see Grandview mine, Dumont, Lead Hill)

**Auburn (31)**  
(see under lead)

**Bailey-Hanson**  
(see Red Top under lead)

**Barefoot (95)**  
(see under silver)

**Bead Lake (100)**  
(see under lead)

**Beaty (27)**  
(see under lead)

**Bella May (new adit) (86)**  
(see also Metaline Mining & Leasing Co.)

**Loc:** NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 32, (39-43E), Metaline dist. **Access:** On road on W. side Pend Oreille R., 1 $\frac{1}{2}$  mi. S. of Metaline Falls. **Owner:** Metaline Mining & Leasing Co., Spokane, Wash. (1952—). **Ore:** Zinc, lead, silver, cadmium. **Ore min:** Sphalerite, galena, pyrite, marcasite, unidentified uranium mineral. **Gangue:** Silicified limestone and dolomite, siderite. **Deposit:** At least 2 replacement bodies in hydrothermally altered Metaline limestone about 150 ft. below the Ledbetter slate. Uranium mineralization appears to be not related to the zinc-lead mineralization. The uranium is contained in thin

coatings (often yellow) along fault surfaces. **Dev:** An ad approx. 6,400 ft. long. More than 12,000 ft. of underground workings. Diamond drill holes. **Improv:** Used primarily as haulage way. **Assays:** A sample from a fault zone with abnormally large amount of yellow radioactive coating assayed 0.19% U.O.<sub>2</sub>. **Prod:** 208,678 tons 1937 through 1943. **Ref:** 40 p. 29. 128, pp. 66-67. 156. 172.

**Berkin**  
(see Wolf Creek under lead)

**Blue Bucket (Kroll) (87)**  
(see also Metaline Mining & Leasing Co.)

**Loc:** SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29 and N $\frac{1}{2}$  sec. 32, (39-43E), Metaline dist. **Elev:** 2,500 ft. **Access:** 2 mi. by road from Metaline Falls. **Owner:** Metaline Mining & Leasing Co., Spokane, Wash. (1932—). Spokane Lead Mines (1907-1908). Diamond R. Mining Co. (1918-1924). Riverview Mining Co. (1931). Century Zinc Co. (1932). **Ore:** Zinc, lead, silver. **Ore min:** Sphalerite, galena, smithsonite, cerussite. **Gangue:** Calcite, siderite. **Deposit:** Irregular replacement bodies of various sizes tending to lie along bedding zones, probably within the upper 350 ft. of the Metaline limestone, contain sphalerite and galena associated with silicified dolomite and calcite. **Dev:** 5,000 ft. of underground workings. **Assays:** 6% Zn, 1% Pb, tr. Ag. **Prod:** 1906, 1907, 1916-1918, 1922-1926, 1937-1950. 175,000 tons by 1942. 200 tons per day in 1942. 56,131 tons 1937 through 1943. **Ref:** 29, p. 31. 46, p. 29. 73, pp. 63-67. 97, 1907, 1908, 1917, 1923-1926. 1930. 98, 1922, 1925. 104, 6/15/32, p. 27; 3/15/36, p. 23. 106, 11/19/31; 5/19/32, p. 7; 7/34. 112, 1918, p. 176. 113, 5/36, p. 7; 8/20/36, p. 6. 128, pp. 65-66. 129, pp. 85-86. 141, p. 22. 172.

**Blue Jim (93)**  
(see under silver)

**Bluebird**  
(see Dumont)

### Bob Tail and Four Flush (72)

**Loc:** Sec. 20, (39-43E), Metaline dist. **Access:**  $\frac{1}{4}$  mi. from road. **Prop:** 2 unpatented claims. **Owner:** Abandoned (1941). Formerly Metaline Contact Mines. **Ore:** Zinc, lead. **Deposit:** Small showings in zinc and lead. **Dev:** Stripping. **Ref:** 29, p. 39.

**Boundary (6)**  
(see under lead)

**Bromide**  
(see La Sota under silver)

**Bunker Hill**  
(see Lead Hill)

**Buzzell**  
(see Lucky Strike)

**Caribou (1)**  
(see under lead)

### Cedar Creek (92)

**Loc:** Near center NW $\frac{1}{4}$  sec. 13, (38-42E). **Elev:** 3,000 ft. **Owner:** Unclaimed (1935). **Ore:** Zinc. **Ore min:** Sphalerite. **Gangue:** Limestone. **Deposit:** Scattered boulders of mineralized limestone which may or may not be in place. **Dev:** None. **Ref:** 158.

**Clark**  
(see Josephine)

### Cliff (20)

**Loc:** N $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 22, (40-43E), Metaline dist. **Elev:** 2,730 ft. **Access:** About 11 mi. N. of Metaline Falls on the Z Canyon road. **Prop:** 1 patented claim. **Cliff Owner:** Drumheller Investment Co., Spokane, Wash. (1935-1945). San Ramone Mining

coatings (often yellow) along fault surfaces. **Dev:** An adit approx. 6,400 ft. long. More than 12,000 ft. of underground workings. **Diamond drill holes.** **Improv:** Used primarily as a haulage way. **Assays:** A sample from a fault zone with abnormally large amount of yellow radioactive coating assayed 0.19% U<sub>3</sub>O<sub>8</sub>. **Prod:** 208,678 tons 1937 through 1943. **Ref:** 46, p. 29, 128, pp. 66-67, 156, 172.

**Berkin**

(see Wolf Creek under lead)

**Blue Bucket (Kroll) (87)**

(see also Metaline Mining & Leasing Co.)

**Loc:** SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29 and N $\frac{1}{2}$  sec. 32, (39-43E), Metaline dist. **Elev:** 2,500 ft. **Access:** 2 mi. by road from Metaline Falls. **Owner:** Metaline Mining & Leasing Co., Spokane, Wash. (1932—). **Spokane Lead Mines (1907-1908).** **Diamond R. Mining Co. (1918-1924).** **Riverview Mining Co. (1931).** **Century Zinc Co. (1932).** **Ore:** Zinc, lead, silver. **Ore min:** Sphalerite, galena, smithsonite, cerussite. **Gangue:** Calcite, siderite. **Deposit:** Irregular replacement bodies of various sizes tending to lie along bedding zones, probably within the upper 350 ft. of the Metaline limestone, contain sphalerite and galena associated with silicified dolomite and calcite. **Dev:** 5,000 ft. of underground workings. **Assays:** 8% Zn, 1% Pb, tr. Ag. **Prod:** 1906, 1907, 1916-1918, 1922-1926, 1937-1950. 175,000 tons by 1942, 200 tons per day in 1942. 56,131 tons 1937 through 1943. **Ref:** 29, p. 31, 46, p. 29, 73, pp. 63-67, 97, 1907, 1908, 1917, 1923-1926, 1930, 98, 1922, 1925, 104, 6/15/32, p. 27; 3/15/36, p. 23, 106, 11/19/31; 5/19/32, p. 7; 7/34, 112, 1918, p. 176, 113, 5/36, p. 7; 8/20/36, p. 6, 128, pp. 65-66, 129, pp. 85-86, 141, p. 22, 172.

**Blue Jim (93)**

(see under silver)

**Bluebird**

(see Dumont)

**Bob Tail and Four Flush (72)**

**Loc:** Sec. 20, (39-43E), Metaline dist. **Access:**  $\frac{1}{4}$  mi. from road. **Prop:** 2 unpatented claims. **Owner:** Abandoned (1941). **Formerly Metaline Contact Mines.** **Ore:** Zinc, lead. **Deposit:** Small showings in zinc and lead. **Dev:** Stripping. **Ref:** 29, p. 39.

**Boundary (6)**

(see under lead)

**Bromide**

(see La Sota under silver)

**Bunker Hill**

(see Lead Hill)

**Buzzell**

(see Lucky Strike)

**Caribou (1)**

(see under lead)

**Cedar Creek (92)**

**Loc:** Near center NW $\frac{1}{4}$  sec. 13, (38-42E). **Elev:** 3,000 ft. **Owner:** Unclaimed (1935). **Ore:** Zinc. **Ore min:** Sphalerite. **Gangue:** Limestone. **Deposit:** Scattered boulders of mineralized limestone which may or may not be in place. **Dev:** None. **Ref:** 158.

**Clark**

(see Josephine)

**Cliff (20)**

**Loc:** N $\frac{1}{2}$ NE $\frac{1}{4}$  sec. 22, (40-43E), Metaline dist. **Elev:** 2,730 ft. **Access:** About 11 mi. N. of Metaline Falls on the Z Canyon road. **Prop:** 1 patented claim. **Cliff.** **Owner:** Drumheller Investment Co., Spokane, Wash. (1935-1945). **San Ramone Mining**

**Co. (1924).** **Pend Oreille Lead & Zinc Co. (1928-1935).** **Ore:** Zinc, lead, silver, gold. **Ore min:** Galena, sphalerite. **Gangue:** Silicified dolomite. **Deposit:** Replacement of silicified dolomite. Replacement zone has been exposed 150 ft. on the surface and 112 ft. in one adit. **Dev:** 245 ft. of adits and shafts with 150 ft. of trenching. **Diamond drilling.** A stope 45 ft. long, 15 ft. wide, 15 ft. high is in the main (200-ft.) adit. **Assays:** One assay said to be typical showed 0.13% Pb, 1.35% Zn. **Av. of 13 samples from main adit was 2.5% Zn, tr. Pb covering the interval from 140 to 165 ft. from portal.** 848 tons milled in 1944 **av. 0.16% Pb, 2.96% Zn.** **Prod:** Prior to 1910, 1923-1924, 1944 (848 tons). **Ref:** 5, p. 198, 7, p. 49, 29, p. 37, 49, p. 4, 73, p. 63, 97, 1924, p. 293; 1925, p. 559, 113, 6/17/37, p. 7, 128, pp. 67-68, 158.

**Coffin (90)**

**Loc:** SE $\frac{1}{4}$ NW $\frac{1}{4}$  and SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 16, (38-42E), near the head of Jim Cr. **Elev:** 5,000 ft. **Access:** Right of way for a road cleared to property from Smackout Pass road W. of Lone in 1937. **Prop:** 40-acre State lease. **Owner:** A. E. Torelle, Spokane, Wash., has 20-yr. mining lease (1943). **Ore:** Zinc, lead, molybdenum. **Ore min:** Sphalerite, galena, pyrrhotite, molybdenite, pyrite. **Gangue:** Diopside, serpentine, jefferisite, talc, pink diopside, calcite. **Deposit:** Contact metamorphic replacement of dolomite. Mineralized zone is about 25 ft. thick and consists of parallel mineralized seams. **Dev:** A few shallow cuts and adits total about 100 ft. **Assays:** One assay gave 1.8% Zn, 3.6% Pb, 0.1 oz. Ag. Another gave 4.4% Pb, 1.56% Mo. **Ref:** 29, p. 41, 128, p. 65, 158.

**Columbia Lead & Zinc Mining Co. (21)**

(see also Hoage)

**Loc:** Secs. 15, 22, and 27, (40-43E), Metaline dist. **Elev:** 2,700 ft. **Access:** About 10 mi. N. of railroad at Metaline Falls by way of Z Canyon road. **Prop:** Includes 7 Hoage claims, 19 other unpatented claims, and 2 patented claims. **Owner:** Columbia Lead & Zinc Mining Co., Spokane, Wash. (1952—). **Ore:** Zinc, lead. **Ore min:** Sphalerite, galena, pyrite. **Gangue:** Dolomite, coarse calcite. **Deposit:** Ore minerals disseminated in silicified dolomite. Mineralized outcrops exposed in several places along the strike for 1,200 ft. One ore body, 51 ft. long, 7 to 15 ft. wide, reported to assay 4% to 23% Pb, Zn. **Dev:** 2 adits total 225 ft., also numerous open cuts. One adit has a stope 18 ft. long and 7 ft. high which does not extend to the limits of the ore. **Improv:** Compressor, drills, track, cars, tools (1952). **Assays:** Composite of many samples of the 30 tons of stockpiled hand-sorted ore showed 4.15% Pb, 11.1% Zn. **Prod:** No shipments, but 30 tons of hand-sorted ore were piled at the mine portal in 1945, and 200 tons of lower grade ore were stockpiled in 1951. **Ref:** 133, p. 32, 158.

**Comstock (101)**

(see under lead)

**Corzine (91)**

(see under lead)

**Diamond Eagle (75)**

**Loc:** Secs. 19 and 30, (39-43E), Metaline dist. **Access:** No road. **Prop:** 27 unpatented claims. **Owner:** Formerly Metaline Contact Mines but now abandoned (1941). **Ore:** Zinc, lead. **Deposit:** Small showings of zinc and lead. **Dev:** Open cuts. **Ref:** 29, pp. 38-39.

**Diamond R. (77)**

(see under lead)

**Dreadnaught-Emily**

(see Hoage)

pyrite,  
te, pos-  
calcite,  
eplaced  
omising  
shafts,  
Au, Ag,  
Prod:

Prop:  
rmerly  
show-  
s. Ref:

ss: On  
Falls,  
Wash.  
min:  
anum  
derite,  
mally  
better  
to the  
thin

Drumheller, Spokane, Wash. (1941—). leasing to Columbia Lead & Zinc Mining Co. (1941-1943). Ore: Zinc, lead, silver. Deposit: Replacement deposit in silicified limestone traceable for 300 ft. on the surface. Dev: 20-ft. shaft, large open cut. Prod: 2 carloads high-grade lead-silver ore from open cut in the 1880's. Ref: 29, p. 35. 68, p. 7. 73, p. 63. 113, 6/11/37, p. 7. 158.

**Hansen (105)**  
(see under gold)

**Hanson**  
(see Red Top under lead)

**Hemlock (52)**  
(see under lead)

**Hidden Treasure (62)**  
(see under lead)

**Hoage (Dreadnaught-Emily) (23)**

Loc: Center S½ sec. 22, (40-43E), a few hundred ft. NE. of Batay Lk., Metaline dist. Elev: 2,700 ft. Access: About 10 mi. N. of Metaline Falls on Z Canyon road. Prop: 7 unpatented claims. Part of Columbia Lead & Zinc Mining Co., Inc. property (1952). Owner: Columbia Lead & Zinc Mining Co., Inc., Spokane, Wash. (1952—). E. J. Hoage, Metaline, Wash. (1941-1948). Ore: Zinc, lead. Ore min: Sphalerite, galena, pyrite. Gangue: Dolomite, coarse calcite. Deposit: Ore minerals disseminated in silicified dolomite. Mineralized outcrops exposed in several places along the strike for 1,200 ft. Dev: 2 adits total 225 ft., also numerous open cuts. One adit has a slope 18 ft. long, 7 ft. wide, 7 ft. high which does not extend to the limits of the ore. Assays: Composite assay of many samples of the 30 tons of stockpiled hand-sorted ore showed 4.15% Pb, 11.1% Zn. Prod: No shipments, but 30 tons of hand-sorted ore were piled at the mine portal in 1945 and 200 tons of lower grade ore stockpiled in 1951. Ref: 29, p. 56. 52, p. 8. 128, p. 69. 158.

**Hoosier**  
(see Fairview-Hoosier)

**Huffman**  
(see Mule Deer under lead)

**Ira Troyer**  
(see Troyer under lead)

**Iron Cap (51)**  
(see under lead)

**Jenny Dee-Snowshoe (50)**  
(see under lead)

**Jim Creek (89)**  
(see under lead)

**Jordan**  
(see under lead)

**Josephine (Clark) (69)**  
(see also Pend Oreille Mines & Metals Co., and see Sullivan, Hortense under lead)

Loc: S½ sec. 16, (39-43E), on W. side Pend Oreille R., Metaline dist. Elev: 2,100 ft. Access: About 3 mi. from Metaline Falls on Z Canyon road. Prop: 20 claims and 1 fraction. At least 17 claims patented. Owner: Pend Oreille Mines & Metals Co., Spokane, Wash. (1934—). Lead-Zinc Co. (1912-1924). Metaline Lead Co. (1924-1926). Pend Oreille Lead & Zinc Co. (1928-1929). Ore: Zinc, lead, silver, cadmium. Ore min: Sphalerite, galena, pyrite, cerussite, smithsonite, anglesite, marcasite, unidentified uranium mineral. Gangue: Calcite, quartz, mountain leather. Deposit: Ore disseminated in silicified

dolomite, especially in brecciated zones cemented by calcite. Replacement ore bodies of irregular shape and grade are near top of Metaline limestone, below black slate. Known ore bodies are 5,000 ft. long, as much as 700 ft. wide, and up to 100 ft. thick (1941). Uranium mineralization is not commercial. It is apparently not related to the zinc-lead ore mineralization. It occurs (1) in a small zone of the Josephine dolomite, (2) in black carbonaceous beds 0.05 to 0.2 ft. thick, and (3) as a "skin" on a fault. Dev: 3 connected openings, Josephine shaft, Cascade or 500-ft.-level adit, and a new shaft. Over a mile of workings. Improv: 750-ton flotation mill, 2,400-ton flotation mill. Complete camp (1956). Assays: Composite sample of ore mined during 8 months in 1931 showed 9.5% Zn, 2.0% Pb, 0.02% Cd. Material from black carbonaceous bed showed 0.16% U<sub>3</sub>O<sub>8</sub>, and material from a fault surface showed 0.08% U<sub>3</sub>O<sub>8</sub>. Prod: 40,000 tons valued at \$275,000 prior to 1919. 243,000 tons prior to 1935. 1936-1955. 187,000 tons in 1949. 273,520 tons in 1951. Ref: 5, pp. 196-197. 7, pp. 47-48. 29, p. 33. 46, pp. 7-19. 73, pp. 56-59. 97, 1912, 1915, 1916, 1925, 1926, 1928, 1930, 1931, 1934, 1937-1951. 98, 1918-1926. 104, 7/15/34, p. 26. 108, 4/41, pp. 3-8; 6/49, pp. 14-17. 112, p. 188. 113, 8/20/26, p. 6. 114, no. 5, 1909, p. 54. 128, pp. 72-74. 133, p. 38. 156. 158. 172.

**King Tut (58)**  
(see under lead)

**Kroll**  
(see Blue Bucket)

**Kurlew (59)**  
(see under lead)

**Lakeview (12)**

Loc: S½ SW¼ sec. 1, (40-43E), on slope N. of Crescent Lk., Metaline dist. Elev: 2,700 ft. Access: About 15 mi. N. of Metaline Falls on Crescent Lk. road. Prop: 4 unpatented claims. Owner: Ivar W. Luhr and associates, Metaline Falls, Wash. (1941). Ore: Zinc, lead, silver. Ore min: Sphalerite, galena, pyrite. Gangue: Dolomitic limestone. Deposit: Nodules of ore an inch or two in dia. with galena cores and sphalerite borders, in dolomite near a fault. Mineralized zone exposed for 200 ft. in length and 15 ft. in width. Dev: 325 ft. of workings, including one 255-ft. adit. Ref: 29, p. 49. 106, 12/1/32, p. 9. 128, pp. 69-70. 158.

**La Sota (Silver Crest, Bromide) (96)**  
(see under silver)

**La Sota (Troyer)**  
(see Troyer under lead)

**Last Chance (36)**  
(see under lead)

**Last Chance (55)**  
(see under lead)

**Lead Hill (Bunker Hill) (63)**

Loc: Secs. 11, 12, 13, 22, 23, 27, and S½NE¼ sec. 14, (40-44E), on upper Slate Cr., Metaline dist. Elev: 4,900 ft. Access: 15 mi. NE. of Metaline Falls on Slate Cr. road. Prop: 50 claims: Lead Hill Nos. 1 to 18, A Z O Nos. 1 to 32. Owner: American Zinc, Lead & Smelting Co., St. Louis, Mo. (1945—). Leadhill Mines, Inc. (1931-1934). Bunker Hill & Sullivan Mining & Concentrating Co. (1930). Chas. Bostrom and Ivar Luhr (1941-1944). Ore: Lead, zinc, silver. Ore min: Galena, sphalerite, smithsonite. Gangue: Microcrystalline quartz, dolomite, barite. Deposit: Galena and sphalerite disseminated in dolomite and jasperoid. Ore zones are flat-dipping replacements. Dev: A 1,400-ft. adit and many surface cuts, shallow adits, and 23,321 ft. of diamond drill holes (1952). Improv:

pg 368

## Minerals—Part II, Metallic Minerals

## Giant-Flying Squirrel (22)

**Loc:** Near center sec. 22, (40-43E), Metaline dist. Elev: 3,000 ft. **Access:** About 10 mi. from Metaline Falls on Z Canyon road. **Prop:** 2 unpatented claims: Giant, Flying Squirrel. **Owner:** Sullivan Mining Co., Wallace, Idaho (1952—). **James Ehle, Metaline, Wash. (1941).** **Ore:** Zinc, lead, silver. **Ore min:** Sphalerite, galena, smithsonite. **Gangue:** Silicified dolomitic limestone and coarse calcite. **Deposit:** Ore minerals disseminated in silicified dolomitic limestone. Ore zone exposed for a length of 300 ft. **Dev:** 3 adits, 373 ft., 50 ft., and 30 ft. long; numerous open cuts and benches. **Improv:** Compressor (1937), several buildings. **Assays:** Est. to av. less than 2% combined lead and zinc. Chip samples from a 3-ft. zone showed no Pb, 7.10% Zn. Sample representing a 12-ft. zone showed 0.50% Pb, 3.45% Zn. **Ref:** 29, p. 56. 51, p. 5. 128, p. 68. 158.

## Gilt Top (33)

**Loc:** Sec. 25, (40-43E), Metaline dist. **Access:** Road. **Prop:** 4 unpatented claims. **Owner:** George Wehnert et al., Metaline Falls, Wash. (1941). **Ore:** Zinc, lead. **Deposit:** Replacement deposit in silicified limestone has been exposed for a length of 400 ft. and a width of 60 ft. **Dev:** Open cuts, stripping. **Ref:** 29, p. 47. 104, 7/15/34, p. 26.

## Glass

(see General MacArthur under lead)

## Gold Hill (64)

(see under lead)

## Grandview mine (68)

(see also Grandview Mines, Inc.)

**Loc:** Secs. 14, 15, 22, and 30, (39-43E), Metaline dist. Elev: 2,400 ft. **Access:** About 2½ mi. by road to railroad at Metaline Falls. **Prop:** 11 patented claims. **Owner:** American Zinc, Lead and Smelting Co., St. Louis, Mo. (1937—), leasing from Grandview Mines Inc., Spokane, Wash. (1929—). **Ore:** Zinc, lead, silver, cadmium. **Ore min:** Sphalerite, galena, smithsonite, cerussite, pyrite, marcasite, and unknown uranium mineral of no commercial importance. **Gangue:** Dolomite, coarse calcite, mountain leather. **Deposit:** Flat-lying irregular massive replacements and disseminations of zinc-lead ore in dolomite. The uranium mineralization is noncommercial and appears to be unrelated to the zinc-lead ore. It occurs in black carbonaceous seams about 0.1 ft. thick, thin fault gouge zones, and as yellow secondary uranium minerals depositing from descending ground waters. **Dev:** Many thousand ft. of underground workings. 28,367 ft. of development work done from 1940 to 1951 inclusive. **Improv:** 750-ton flotation mill, 6 dwellings (1952). **Assays:** 5.5% Zn, 1.5% to 2.0% Pb, tr. Ag. Material from the black carbonaceous seams assayed 0.16% U<sub>3</sub>O<sub>8</sub>. **Prod:** 1924-1926, 1928-1930, 1940-1955. 1,254,000 tons 1940-1951 inclusive. **Ref:** 29, p. 32. 43, 2/53, p. 148; 5/54, pp. 56-59. 46, pp. 20-28. 73, pp. 59-60. 97, 1924-1926, 1929, 1930, 1941-1952. 104, 7/15/36, p. 30. 108, 10/39, p. 31; 4/43; 5/43. 113, 6/17/37, p. 7. 114, no. 5, 1909, p. 4. 128, pp. 68-69. 133, pp. 30, 34. 156. 158. 172.

## Grandview Mines, Inc.

(see also Red Top, Hidden Treasure, Mohawk under lead, and Grandview mine under zinc)

**Loc:** Northern Pend Oreille and Stevens Counties. **Prop:** Own or lease mineral rights on 9,000 acres, including Grandview mine, Hidden Treasure, Red Top, and many others. **Owner:** Grandview Mines, Inc., Spokane, Wash. (1952—). Leasing Grandview mine to American Zinc, Lead and Smelting Co. **Ore:** Zinc, lead, silver, and other values. **Ref:** 133, p. 34.

## Hanley (4)

**Loc:** NE¼ sec. 10, (40-43E), Metaline dist. **Access:** 1 mi. from road. **Prop:** 1 patented claim: Hanley. **Owner:** Joseph

pg 369

## Zinc Occurrences—Pend

Drumheller, Spokane, Wash. (1941—), leasing to Columbia Lead & Zinc Mining Co. (1941-1943). **Ore:** Zinc, lead, silver. **Deposit:** Replacement deposit in silicified limestone traceable for 300 ft. on the surface. **Dev:** 20-ft. shaft, large open cut. **Prod:** 2 carloads high-grade lead-silver ore from open cut in the 1880's. **Ref:** 29, p. 35. 68, p. 7. 73, p. 63. 113, 6/11/37, p. 7. 158.

## Hansen (105)

(see under gold)

## Hanson

(see Red Top under lead)

## Hemlock (52)

(see under lead)

## Hidden Treasure (62)

(see under lead)

## Hoage (Dreadnaught-Emily) (23)

**Loc:** Center S½ sec. 22, (40-43E), a few hundred ft. NE. of Batay Lk., Metaline dist. Elev: 2,700 ft. **Access:** About 10 mi. N. of Metaline Falls on Z Canyon road. **Prop:** 7 unpatented claims. Part of Columbia Lead & Zinc Mining Co., Inc. property (1952). **Owner:** Columbia Lead & Zinc Mining Co., Inc., Spokane, Wash. (1952—). **E. J. Hoage, Metaline, Wash. (1941-1948).** **Ore:** Zinc, lead. **Ore min:** Sphalerite, galena, pyrite. **Gangue:** Dolomite, coarse calcite. **Deposit:** Ore minerals disseminated in silicified dolomite. Mineralized outcrops exposed in several places along the strike for 1,200 ft. **Dev:** 2 adits total 225 ft., also numerous open cuts. One adit has a stope 18 ft. long, 7 ft. wide, 7 ft. high which does not extend to the limits of the ore. **Assays:** Composite assay of many samples of the 30 tons of stockpiled hand-sorted ore showed 4.15% Pb, 11.1% Zn. **Prod:** No shipments, but 30 tons of hand-sorted ore were piled at the mine portal in 1945 and 200 tons of lower grade ore stockpiled in 1951. **Ref:** 29, p. 56. 52, p. 8. 128, p. 69. 158.

## Hoosier

(see Fairview-Hoosier)

## Huffman

(see Mule Deer under lead)

## Ira Troyer

(see Troyer under lead)

## Iron Cap (51)

(see under lead)

## Jenny Dee-Snowshoe (50)

(see under lead)

## Jim Creek (89)

(see under lead)

## Jordan

(see under lead)

## Josephine (Clark) (69)

(see also Pend Oreille Mines & Metals Co., and see Sullivan, Hortense under lead)

**Loc:** S½ sec. 16, (39-43E), on W. side Pend Oreille R., Metaline dist. Elev: 2,100 ft. **Access:** About 3 mi. from Metaline Falls on Z Canyon road. **Prop:** 20 claims and 1 fraction. At least 17 claims patented. **Owner:** Pend Oreille Mines & Metals Co., Spokane, Wash. (1934—). Lead-Zinc Co. (1912-1924). Metaline Lead Co. (1924-1926). Pend Oreille Lead & Zinc Co. (1928-1929). **Ore:** Zinc, lead, silver, cadmium. **Ore min:** Sphalerite, galena, pyrite, cerussite, smithsonite, anglesite, marcasite, unidentified uranium mineral. **Gangue:** Calcite, quartz, mountain leather. **Deposit:** Ore disseminated in silicified

Compressor and shop building, three 100-ton ore bins, access roads (1952). Assays: Assays on shipments showed 62.05% Pb, 3.6 oz. Ag; but, as a whole, zinc predominates over lead in the ratio of more than 2 to 1. Prod: Small carload of hand-picked galena shipped in 1937. Milled 1,230 tons in 1951, 9,570 tons in 1952. Ref: 29, p. 33. 71. 97, 1938, p. 459; 1951, p. 1615. 99, 11/27/34. 104, 11/15/34, p. 27. 106, 2/5/31; 3/19/31; 4/16/31; 6/16/32. 113, 10/34, p. 14. 128, p. 63. 158.

#### Lead Hill Extension (46)

Loc: Secs. 15, 21, and 22, (40-44E), Metaline dist. Prop: 9 unpatented claims. Owner: Harry Meyers, Newport, Wash. (1941). Ore: Zinc, lead. Deposit: Replacement deposit in limestone largely hidden by overburden. Dev: Open cuts, mostly in overburden. Ref: 29, p. 55.

#### Lead King (25)

(see under lead)

#### Lead Metal (65)

(see under iron)

#### Lead Queen (8)

(see under lead)

#### Little Noisy (94)

Loc: NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 17, (38-44E), on N. side of Noisy Cr. about 1 mi. above its mouth. Elev: 3,500 ft. Access: 13 mi. from Ione on the Sullivan Lk. road and  $\frac{1}{2}$  mi. by trail up Noisy Cr. Canyon. Prop: 6 unpatented claims. Owner: I. E. Boswick and A. Krantz, Ione, Wash. (1951). Ore: Zinc, lead, silver, gold, copper. Ore min: Sphalerite, galena, chalcopryrite, molybdenite, pyrrhotite, scheelite, pyrite. Gangue: Quartz, carbonate, tourmaline. Deposit: Quartz vein 1 to 4 ft. thick and at least 460 ft. long in metamorphic rocks and granite, also mineralized dolomite. Dev: 3 adits, one 230 ft., one 80 ft., and one 950 ft. (caved). A 30-ft. shaft, and an open cut. Assays: 0.25% scheelite. Said to run \$1.50 Au. Av. of all values is \$25 per ton. One sample showed 10.5% Pb, 14.9% Zn, 5.05 oz. Ag, 0.03 oz. Au. Ref: 29, p. 62. 37, pp. 54-55. 46, p. 35. 68, p. 12. 128, p. 65. 158.

#### Lloyd (103)

(see under lead)

#### Lookout (35)

(see under lead)

#### Lucky Boy (57)

(see under lead)

#### Lucky Boy Rex (34)

Loc: Sec. 25, (40-43E) and sec. 30, (40-44E), Metaline dist. Access: Road. Prop: 7 unpatented claims. Owner: Dumont brothers, Metaline Falls, Wash. (1941—). Ore: Zinc, lead. Deposit: Replacement deposit of silicified limestone has been traced on the surface for a length of 200 ft. and a width of 6 to 80 ft. Dev: 210 ft. of adits, numerous open cuts. Ref: 29, pp. 47-48. 104, 7/15/34, p. 26. 133, p. 30. 158.

#### Lucky Strike (Buzzell) (37)

Loc: NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 35, (40-43E), on E. side of Pend Oreille R., Metaline dist. Access: About 9 mi. from Metaline Falls on the Slate Cr. road. Prop: 4 unpatented claims. Owner: R. L. Lakin and associates, Spokane, Wash. (1942). Silver-Lead Mining Co. (1907). Ore: Zinc, lead, iron. Ore min: Sphalerite, pyrite, smithsonite, limonite. Gangue: Dolomite, coarse calcite. Deposit: Mineralized breccia zone from 0 to 4 ft. in width. Parts of the zone are nearly solid pyrite. Probably less than 100 tons of limonite available. Dev: An inclined shaft and several drifts, inaccessible in 1937. Prod: 1922, 1925. Ref: 29, p. 40. 97, 1923, p. 413; 1926, p. 468. 116, no. 12, 1907, p. 16. 128, p. 71. 158.

#### M M (13)

(see under lead)

#### Mack (53)

(see under lead)

#### Mammoth

(see Morning and Mammoth under lead)

#### May Thomas

(see under lead)

#### Maybeso (54)

(see under lead)

#### Metaline Contact (73)

(see also Metaline Mining & Leasing Co.)

Loc: E $\frac{1}{2}$ SW $\frac{1}{4}$  and W $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 20, (39-43E), Metaline dist. Elev: 3,000 ft. Prop: 160 acres. Owner: Metaline Mining & Leasing Co. Spokane, Wash., lessee (1949). Ore: Zinc, lead, silver. Ore min: Sphalerite, galena, minor pyrite. Deposit: Replacement deposit in brecciated zones along limestone-dolomite contact. Dev: 2,500 ft. of raises, 2,650 ft. of drifts, 250 ft. of slabbing. Ref: 46, p. 29. 68, p. 13.

#### Metaline Falls (79)

(see under lead)

#### Metaline Metals (66)

(see also Pend Oreille Mines & Metals Co.)

Loc: Secs. 10, 11, and 15, (39-43E) and sec. 35, (40-43E), Metaline dist. Access: 6 mi. from Metaline Falls by road. Prop: 3 patented and 39 unpatented claims. Owner: Pend Oreille Mines & Metals Co. (1949). Ore: Zinc, lead, silver. Deposit: Replacement of silicified limestone. Dev: 400-ft. shaft with 2 levels; total about 1,000 ft. of workings. Some diamond drilling. Assays: Av. ore runs 4.5% Zn, 1.0% Pb, tr. Ag. Ref: 29, p. 34.

#### Metaline Mining & Leasing Co. (81)

(see also Bella May, Blue Bucket, Riverview, Metaline Contact, Sterling under zinc, and Red Top, Diamond R., Hidden Treasure under lead)

Loc: Secs. 26, 29, 30, 32, and 35, (39-43E), Metaline dist. Elev: 2,000 to 3,100 ft. Access:  $\frac{1}{4}$  mi. S. of Metaline on State Highway 6. Prop: 39 claims and 376 acres deeded land, plus other leased property. Owner: Metaline Mining & Leasing Co. has operating agreement with Sullivan Mining Co., Wallace, Idaho (1950-1971). Ore: Zinc, lead, silver. Ore min: Sphalerite, galena, pyrite, marcasite, unidentified uranium mineral. Gangue: Silicified limestone and dolomite. Deposit: Replacement in dolomitic limestone. Dev: Main haulage adit more than 6,000 ft. long. More than 12,000 ft. of workings, diamond drill holes. Completed in 1950: 1,905 of drifting, 532 ft. of raising, 4,673 ft. of diamond drilling. Assays: 284,809 tons produced Oct. 1937 through Dec. 1947 av. 7.45% combined lead and zinc. 439,809 tons produced av. 6.55% combined lead and zinc. Prod: 410,724 tons of ore valued at \$2,573,294 in 1938-1947. Ref: 104, 6/15/32, p. 27; 3/15/34, p. 23. 106, 7/34. 108, 7/39. 113, 8/20/36, p. 6. 133, p. 37. 156. 158. 172.

#### Mockingbird (29)

(see under lead)

#### Morning and Mammoth (67)

(see under lead)

#### Mount Pisgah (104)

(see under lead)

#### Mountain Goat (5)

(see under lead)



**Mule Deer (98)**

(see under lead)

**O. K. (84)**

(see under silver)

**Ore Hill (83)**

Loc: Secs. 33 and 34, (39-43E), Metaline dist. Access: Near road. Prop: 10 unpatented claims. Owner: Abandoned (1941). Ore: Zinc, lead. Deposit: Slight mineralization of limestone. Dev: Open cuts and stripping. Ref: 29, p. 43.

**Oriole (74)**

Loc: SE. cor. sec. 19, (39-43E), on N. slope of Linton Mtn., Metaline dist. Elev: 3,000 ft. Access: 1½ mi. from old Metaline on Linton Cr. road. Prop: 7 claims and 1 traction. Owner: Arthur Betchart and E. O. Dressel, Jr., Metaline Falls, Wash. (1953—). Oriole Mining & Milling Co. 1907. Metaline Oriole Mining Co. (1911-1924). Metaline Minerals Co. (1922-1924). Frank Schultz (1935). W. L. Schultz, Metaline, Wash. (1942). Ore: Zinc, lead, silver, copper, gold. Ore min: Sphalerite, galena, tetrahedrite, chalcopryrite, pyrite, malachite, azurite, smithsonite, cerussite, bornite. Gangue: Quartz, calcite, dolomite. Deposit: Quartz lenses up to 3 ft. wide and 20 ft. long along a gouge breccia seam in dolomite. Dev: 2,000 ft. of workings, mostly in 3 adits. Assays: Smelter returns on carload of picked ore: 42.1 oz. Ag, 21.9% Zn, 15.3% Pb, 1.12% Cu. Prod: 2,000 tons up to 1942. 1911, 1912, 1925, 1926, 1953. Ref: 5, pp. 195-196. 7, pp. 46-47. 29, p. 36. 73, pp. 67-69. 97, 1912, 1917, 1926. 98, 1922, p. 1655; 1925, p. 1823. 112, p. 190. 114, no. 5, 1909, p. 56. 116, no. 8, 1907, p. 14. 128, pp. 76-77. 129, pp. 87-88. 141, p. 46. 158.

**Pacnor Mines**

Loc: Russian Cr. area. Prop: 47 claims. Owner: Pacnor Mines, Inc., Spokane, Wash. (1952). Ore: Zinc, lead. Ref: 158.

**Pay Day (16)**

Loc: Secs. 15 and 22, (40-43E), Metaline dist. Access: ½ mi. from road. Prop: 1 unpatented claim. Owner: Jack Dannelson, Metaline, Wash. (1941). Ore: Zinc, lead. Deposit: Replacement zone in silicified limestone has been traced on the surface for about 150 ft. in length and 10 ft. in width. Dev: 15-ft. shaft, open cut. Ref: 29, p. 44.

**Pearson (82)**

Loc: Sec. 33, (39-43E), Metaline dist. Access: Road. Prop: 80 acres of deeded land used for farming. Ore: Zinc, lead. Dev: None. Assays: Traces of lead and zinc. Ref: 29, p. 44.

**Peewee (15)**

Loc: Sec. 15, (40-43E), Metaline dist. Access: 300 yd. from road. Prop: 3 unpatented claims. Owner: Jim Ehle, Metaline, Wash. (1941). Ore: Zinc, lead. Deposit: Replacement of limestone. Dev: 40 ft. of tunnel, open cuts. Ref: 29, p. 45.

**Pend Oreille Iron, Lead, and Zinc (14)**

Loc: Sec. 6, (40-44E), Metaline dist. Prop: 20 unpatented claims. Owner: Abandoned (1941). Ore: Zinc, lead. Deposit: Slight showings of zinc and lead. Dev: Open cuts. Ref: 29, pp. 61-62.

**Pend Oreille Mines & Metals Co. (70)**

(see also Josephine, Metaline Metals, Torrential-Sphinx, Yellowhead under zinc, and Flusey-Hoopala, Washington, Metaline Falls, Riverside, Z Canyon under lead)

Loc: Metaline dist. Access: Road. Prop: Several hundred acres of deeded property, many claims, including Josephine mine. Also own controlling interest in Reeves MacDonald Mines, Ltd. Owner: Pend Oreille Mines & Metals Co., Spokane,

Wash. (1934—). Ore: Zinc, lead, silver, cadmium. Ore min: Sphalerite, galena, pyrite, marcasite, smithsonite, cerussite, unidentified uranium mineral. Gangue: Dolomite, jasperoid, calcite. Deposit: Replacement ore bodies of irregular shape and grade are near top of Metaline limestone, below black slate. Known ore bodies are 5,000 ft. long, as much as 700 ft. wide, and up to 100 ft. thick (1941). Uranium mineralization is not commercial. It is apparently not related to the zinc-lead mineralization. It occurs (1) in a small zone of the Josephine dolomite, (2) in black carbonaceous beds 0.05 to 0.2 ft. thick, and (3) as a "skin" on a fault. Gallium and germanium have been detected spectrographically in ore from the Chickahominy claim. Dev: More than a mile of underground workings. Improv: 750-ton flotation mill and 2,400-ton flotation mill, power plant, apartment house, complete camp (1954). Assays: Ore as mined was 5% to 7% Zn and 0.5% to 2% Pb in 1941. Ore produced in 1948 av. 5.87% Zn, 3.57% Pb. 1951 production av. 1.11% Pb, 2.37% Zn. Prod: 1927-1955, 3,111 tons valued at \$8.76 per ton in 1915 from Clark property. 123,751 tons of ore in 1948. 186,955 tons in 1949. 186,197 tons of ore in 1950 yielded 9,850,731 lb. Zn, 6,336,653 lb. Pb, 18,000 oz. Ag, 30,000 lb. Cu. 273,580 tons of ore in 1951 yielded 12,950,584 lb. Zn, 6,045,914 lb. Pb, 16,041 oz. Ag. 1952-1955. Ref: 1-C, 9/55, pp. 846-849. 43, 7/52, pp. 90-93. 83, 97, 1937-1952. 101, 11/53, pp. 28-29, 105. 108, 4/41; 5/41. 110, 7/48, p. 5. 133, p. 38. 156. 158. 172.

**Pine Cone-Z Canyon (19)**

Loc: Secs. 22 and 23, (40-43E), Metaline dist. Access: ½ mi. from road. Prop: 15 unpatented claims. Owner: Messrs. Pfeiffer and Dannelson, Metaline, Wash. (1941). Ore: Zinc, lead. Deposit: Replacement deposit in limestone. Dev: Open cuts. Ref: 29, p. 45.

**Red Crown (38)**

(see under lead)

**Red Top (61)**

(see under lead)

**Riverview (28)**

(see also Metaline Mining &amp; Leasing Co.)

Loc: Secs. 26 and 35, (40-43E), Metaline dist. Access: 1 mi. from road. Prop: 5 unpatented claims. Owner: Metaline Mining & Leasing Co. (1949). Ore: Zinc, lead, silver. Deposit: Replacement deposit in silicified limestone. Zone shows only slight mineralization where exposed. Dev: 80 ft. of adits, numerous open cuts. Ref: 29, p. 44. 46, p. 29. 68, p. 13.

**Robert E. Lee (39)**

(see under lead)

**Rocky Creek (97)**

(see under silver)

**Saddle (17)**

Loc: Secs. 14, 15, 22, and 23, (40-43E), Metaline dist. Access: 1¼ mi. from road. Prop: Group of claims. Owner: Maude Lindstrom, Spokane, Wash. (1941). Ore: Zinc, lead, iron. Deposit: Replacement deposit in limestone exposed on the surface for about 300 ft. along the strike. Dev: 10-ft. adit, numerous open cuts and trenches. Ref: 29, p. 61.

**Salmon (56)**

(see under lead)

**Scandinavian**

(see Lead Queen under lead)

**Silver Crescent (9)**

(see under lead)

- Silver Crest**  
(see La Sota under silver)
- Silverado**  
(see Z Canyon under lead)
- Slate Creek (47)**  
(see Whoopie-Galena Hill)
- Snowshoe**  
(see Jenny Dee-Snowshoe under lead)
- Sphinx**  
(see Torrential-Sphinx)
- Star (41)**  
(see under lead)
- Star (43)**  
(see under lead)
- Sterling (88)**  
(see also Metaline Mining & Leasing Co.)  
Loc: SW  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec. 32, (39-43E), Metaline dist. Elev: 2,000 ft. Access: On State highway. Prop: 10 patented claims. Owner: Metaline Mining & Leasing Co., Spokane, Wash. (1932-1949). Sterling Silver-Lead Co. (1915-1926). Century Zinc Co. (1932). Ore: Zinc, lead, silver. Cobalt and manganese have been reported but are not now known to occur here. Ore min: Galena, sphalerite. Deposit: Replacement deposit of Yellowhead type. The replacement deposit near the Bella May group is similar to that at the Metaline Contact property. Prod: 1918, 1926. Ref: 29, p. 31. 46, pp. 32-33. 68, p. 13. 97, 1918, p. 507; 1926, p. 468. 98, 1922, p. 1666; 1925, p. 1833. 104, 6/15/32, p. 27; 3/15/36, p. 23. 106, 7/34. 112, p. 204. 113, 8/20/36, p. 6.
- Sullivan (71)**  
(see under lead)
- Sunshine (49)**  
(see under lead)
- Tamarack (60)**  
(see under lead)
- Texas Slim**  
(see Georgia Rose-Texas Slim)
- Tom Cat (2)**  
(see also Gardner)  
Loc: Center S. line sec. 3, (40-43E), Metaline dist. Elev: 2,000 ft. Access:  $\frac{1}{4}$  mi. E. of road 1 mi. N. of Z Canyon. Prop: 1 unpatented claim: Tom Cat (part of Gardner property). Owner: E. O. Dressel, Metaline Falls, Wash. (1937-1941). Ore: Zinc, lead. Ore min: Sphalerite, galena. Gangue: Dolomite. Deposit: Disseminations in dolomite and silicified carbonate rock. Dev: 26-ft. vertical shaft, 14-ft. drift, 2 open cuts, 3 diamond drill holes. Assays: 3 diamond drill holes showed 6 ore intersections 4 to 6 ft. thick which showed nil to 15.3% Pb, 0.4% to 1.8% Zn, the av. being 3.2% Pb, 0.9% Zn. 5 channel samples av. 1.1% Pb, 1.3% Zn. Ref: 19. 128, p. 74.
- Torrell**  
(see under lead)
- Torrential-Sphinx (10)**  
(see also Pend Oreille Mines & Metals Co.)  
Loc: W  $\frac{1}{2}$  SW  $\frac{1}{4}$  sec. 11, (40-43E), Metaline dist. Access: Road. Prop: 2 unpatented claims. Owner: Pend Oreille Mines & Metals Co. (1941). Ore: Zinc, lead. Ore min: Sphalerite and some galena. Deposit: Replacement of silicified limestone. Ore body has been traced for 200 ft. laterally. Dev: 150 ft. of adits, raises, and shafts, and 200 ft. of trenching. Ref: 29, p. 35.
- Troyer (La Sota, Ira Troyer) (45)**  
(see under lead)
- Twin Lakes (24)**  
(see under lead)
- Uncas (44)**  
Loc: Sec. 28, (40-44E), Metaline dist. Elev: 3,500 to 4,000 ft. Access: 2 mi. of trail from Slate Cr. road. Prop: 6 claims and 2 fractions. Owner: William and George Dumont. Ore: Zinc, lead, copper. Ore min: Sphalerite, galena, tetrahedrite, copper carbonates. Gangue: Dolomite, quartz. Deposit: Ore minerals disseminated in dolomitic limestone and in quartz lenses. Dev: 2 adits, both caved (1951). Ref: 128, p. 64. 158.
- Velvet**  
(see under lead)
- Velvet Lode**  
(see King Tut under lead)
- Washington (80)**  
(see under lead)
- Washington Rock**  
(see Washington under lead)
- West**  
(see Blue Jim under silver)
- Whoopie-Galena Hill (Slate Creek) (48)**  
Loc: Secs. 14, 15, 21, 22, and 28, (40-44E), on Slate Cr., Metaline dist. Access: Forest Service road. Prop: 18 unpatented claims: Galena Hill Nos. 1 to 8, Whoopie Nos. 1 to 5, May Day, May Day Fraction, Prospect No. 2. Owner: Fred E. Davenport and Ira Troyer, Metaline, Wash. (1941). Ore: Zinc, lead, silver. Deposit: Replacement deposit in silicified limestone. Dev: 310 ft. of adits, numerous open cuts. Ref: 29, p. 42. 46, p. 34.
- Wolf Creek (65)**  
(see under lead)
- Woodpecker (26)**  
Loc: Sec. 27, (40-43E), Metaline dist. Access:  $\frac{1}{4}$  mi. from road. Prop: 5 unpatented claims. Owner: Abandoned (1941). Formerly Metaline Contact Mines. Ore: Zinc, lead. Deposit: Small showings of zinc and lead. Ref: 29, p. 39.
- Yellowhead**  
(see also Pend Oreille Mines & Metals Co.)  
Loc: Metaline dist. Owner: Pend Oreille Mines & Metals Co. (1930). Ore: Zinc, lead. Ore min: Sphalerite, galena, pyrite. Deposit: In unfaulted block of Metaline limestone. Ref: 97, 1930, p. 674. 172, pp. 8, 15.
- Z Canyon (Pine Cone-Z Canyon)**  
(see Pine Cone-Z Canyon)
- Z Canyon (Silverado) (11)**  
(see under lead)
- Z Canyon Mutual (7)**  
Loc: N. center sec. 11, (40-43E), Metaline dist. Elev: 2,400 ft. Access: 1 mi. by road W. of Crescent Lk. Ore: Zinc, lead. Ore min: Sphalerite, galena. Gangue: Dolomite, calcite. Deposit: Sparsely disseminated ore minerals in dolomite and breccia. Dev: 400-ft. adit and a few pits and small cuts. Ref: 128, p. 75.

## PIERCE COUNTY

## Golden Rule (1)

Loc: Center E  $\frac{1}{2}$  sec. 24, (18-7E). Access: 1 mi. by trail N. of Queen Bee cabin. Prop: 1 claim (?). Owner: R. J. McGillivray, Alder, Wash. (1943). Ore: Zinc, molybdenum, copper. Ore min: Pyrite, sphalerite, molybdenite, scheelite (?), mala-

**Black Rock (Washington Black Rock, Gorien Zinc) (35)**

**Loc:** Sec. 24, (39-40E), on E. side of Deep Cr. just N. of the Last Chance mine. **Elev:** 2,000 ft. **Access:** 6 mi. by road to railroad at Northport. **Prop:** 7 claims and 7 acres of deeded land. **Owner:** Last Chance Consolidated Mines, Inc., Spokane, Wash. (1952—). **Gust Maki** (1920). **John Gorien** (1921). **Washington Black Rock Mining Co.** (1922-1932). **Black Rock Mining Co.** (1936). **Knob Hill Mines, Inc.** (Willow Creek Mines, Inc.) (1943). **Ore:** Zinc, lead. **Ore min:** Sphalerite, smithsonite, galena. **Gangue:** Dolomite. **Deposit:** Disseminated ore in white unslificed dolomitic marble along bedding planes. Two ore bodies shown by drilling appear to have moderate ore reserves with av. grade of 8% Zn. **Dev:** 250-ft. incline, 260-ft. adit, considerable drifting and stoping on the 200- and 250-ft. levels, diamond drill and churn drill holes. **Assays:** 6 carloads av. 40% Zn. Ore contains traces of gallium and germanium. **Prod:** 6 carloads of ore prior to 1920, 5,280 tons in 1922-1924, \$300,000 prior to 1930. Produced in 1943. **Ref:** 30, pp. 92-93. 46, pp. 82-84. 73, pp. 107-109. 97, 1923-1926, 1928. 98, 1922-1926. 106, 6/1/25, p. 7; 11/1/29, p. 25; 6/2/32. 113, 8/20/36, p. 6. 129, pp. 111-112. 130, p. 91. 133, p. 36. 141, pp. 21, 22, 46. 157. 158.

**Black Witch**

(see Alma under silver)

**Bliss**

(see Galena Hill under lead)

**Blue Ridge**

(see Sierra Zinc)

**Blue Star**

(see Eagle under silver)

**Bonanza (72)**

(see under lead)

**Boundary Silver Lead**

(see Lucile)

**Brooks (123)**

(see under silver)

**Bruce Creek**

(see A and C under copper)

**Buffalo (68)**

(see under silver)

**Bullion (24)**

(see under lead)

**Burrus (Rocky Creek) (91)**

**Loc:** Sec. 8, (37-41E), on Rocky Cr., Northport dist. **Elev:** 2,400 ft. **Access:** 1 mi. SE. of Aladdin by road. **Prop:** 8 patented claims. **Owner:** J. W. Burrus, Colville, Wash. (1947). **Ore:** Lead, silver, zinc, copper, gold. **Ore min:** Chalcopyrite, galena, sphalerite. **Gangue:** Quartz. **Deposit:** Mineralized zone with max. width of 60 ft. consists of small quartz veins in argillite. **Dev:** 80-ft. shaft and several short adits total 300 ft. of underground workings. **Assays:** Ore said to av. \$20 per ton in all values. **Prod:** 1938, 1939. **Ref:** 30, pp. 91-92. 46, p. 60. 52, p. 7. 97, 1939, p. 49; 1940, p. 480. 104, 8/15/34, p. 22; 11/30/35, p. 26; 3/15/38. 106, 11/3/32, p. 14; 7/34. 158.

**Carbo (45)**

**Loc:** E. edge of sec. 25, (39-41E), 1½ mi. E. of Deep Lk., Northport dist. **Access:** Trail from a point 2 mi. up the logging road which follows Currant Cr. **Prop:** Private land. **Owner:** Leased by John Colby, Northport, Wash., from North Columbia Lumber Co., Deer Park, Wash. (1942). **Ore:** Zinc. **Ore min:** Smithsonite. **Gangue:** Dolomite. **Deposit:** Ore is an aggregate of cavernous lenses of smithsonite-rich dolomite elongated parallel to bedding of low-dipping beds in lower Metaline

limestone. Ore zone is cut off by major fault 100 to 250 ft. down dip from outcrop. May be ore in breccia zone along fault. **Dev:** None (1944). **Assays:** Aggregate of exposed ore lenses and interbedded waste est. to av. 3% Zn for thickness of 15 ft. and strike length of 300 ft. A 12-ft.-thick lens showed 20.5% Zn. **Ref:** 20.

**Chewelah Eagle**

(see Eagle under silver)

**Chinto (106)**

(see under copper)

**Chloride Queen (78)**

(see under lead)

**Cholett**

**Loc:** Sec. 1, (37-39E), 5 mi. W. of Van Stone mine. **Elev:** 3,000-4,000 ft. **Owner:** American Smelting & Refining Co., Wallace, Idaho (1951—). **Ore:** Zinc, lead. **Ore min:** Sphalerite, pyrite. **Deposit:** Gossan and primary sulfides disseminated in Metaline limestone near intrusive contact with granodiorite. **Dev:** 7 bulldozer trenches, diamond drill holes. **Assays:** 5-ft. gossan assayed 7.9% Zn, and for 65 ft. the zone av. 2.2% Zn. **Ref:** 1-C, vol. 7, no. 10, pp. 937-940.

**Cleveland (118)**

(see under lead)

**Clugston**

(see Silver Trail under lead)

**Columbia**

(see Iroquois)

**Columbia Tungsten (115)**

(see under tungsten)

**Colville Queen**

(see Chloride Queen under lead)

**Comstock (Abe Lincoln) (12)**

(see under lead)

**Contention**

(see Mountain View under silver)

**Copper King (55)**

(see under lead)

**Copper King (86)**

(see under lead)

**Coyote (19)**

(see under lead)

**Coyotte**

(see Coyote under lead)

**Daisy**

(see Daisy-Tempest under silver)

**Daisy-Tempest (102)**

(see under silver)

**Dead Medicine**

(see Silver Trail under lead)

**Deep Creek (Gorien Zinc, Northport) (38)**

**Loc:** Secs. 23 and 24, (39-40E), about 100 yd. from the W. bank of Deep Cr. **Elev:** 1,900 ft. **Access:** 6 mi. by road to railroad at Northport. **Prop:** Several claims. **Owner:** The Goldfield Consolidated Mines Co., San Francisco, Calif. (1944—). **Northport Mining Co.** (1919-1921). **Knob Hill Mines, Inc.** (1943). **Jamieson-Higginbotham** (1944-1947). **Ore:** Zinc, lead, silver. **Ore min:** Sphalerite, galena, pyrite. **Gangue:** Dolomite and limestone. **Deposit:** Ore is in highly banded and contorted zone 50 to 100 ft. thick and 200 to 300 ft. long in dolomite. **Lead**

values are highest to the south. Dev: Inclined shaft 850 ft. deep, workings on 8 levels. Assays: 1949 production reported to av. 4.25% combined Pb and Zn. One vein assayed 25% Pb, 6.8 oz. Ag. Prod: 1944-1952 (350,000 tons), 1953-1955. Ref: 30, p. 111. 46, pp. 80-81. 97, 1950, p. 1613; 1951, p. 1616. 108, 3/54, pp. 279-281. 129, pp. 107-110. 130, p. 91. 133, p. 34.

**Deep Lake**

(see Farmer)

**Deer Trail (121)**

(see under silver)

**Defender (7)**

Loc: N½ sec. 25, (39-36E), on W. slope of Toulou Mtn., Orient dist. Elev: 1,900 to 2,400 ft. Access: 1½ mi. SE. of Orient by road and trail. Prop: 11 claims and a fraction, 2 patented. Owner: Estate litigation (1941). Defender Mining Co. (1909-1914). Ore: Zinc, copper, gold, silver. Ore min: Sphalerite, pyrite, pyrrhotite, chalcopyrite, galena. Free gold. Gangue: Calcite, quartz, siderite. Deposit: 150-ft. zone near a fault in monzonite and amphibolite contains many veins. One is 18 in. wide. Dev: Small open cuts and shallow shafts on each claim and a 106-ft. inclined shaft on the Denver claim. Assays: A 60-ft. intrusive dike said to assay \$3 to \$4 Au. Ref: 7, pp. 80-81. 30, pp. 119-120. 46, pp. 103-104. 114, no. 5, 1909, pp. 61-62. 164, pp. 269-270.

**Dora**

(see Acme under lead)

**Double Standard (14)**

(see under copper)

**Eagle (108)**

(see under silver)

**Easter Sunday (9)**

(see under gold)

**Easy Money**

(see Magma)

**Echo (80)**

Loc: Sec. 14, (37-39E), adjacent to the Big Chief mine, Northport dist. Prop: 7 claims. Owner: Echo Mining Co. (1941). Ore: Zinc, lead, silver. Ore min: Mixed sulfides. Deposit: Presumably similar to the Big Chief deposit. Dev: 2 adits reportedly total 850 ft. of underground workings. Ref: 46, p. 51. 158.

**Eldorado**

(see Magma)

**Electric Point (46)**

(see under lead)

**Emerald**

(see under lead)

**Empire (36)**

Loc: Sec. 24, (39-40E), 5 mi. from Northport. Ore: Zinc, lead. Ref: 158.

**Eureka (2)**

(see under gold)

**Eureka (Uncle Sam)**

(see Uncle Sam under lead)

**Eureka and Orient**

(see Eureka under gold)

**Evergreen (69)**

(see under lead)

**Farmer (Deep Lake) (42)**

Loc: Sec. 34, (39-41E), at S. end of Deep Lk. Elev: 2,050 to 2,425 ft. Access: 12 mi. by road to railroad at Northport. Prop: 2 claims: King Tut No. 1, King Tut No. 2. Owner: John and Tom Farmer, Spokane, Wash. (1944—), leasing to C. W. and N. C. Hartbauer, Northport, Wash. (1950-1952). Ore: Zinc, lead, silver. Ore min: Sphalerite, galena, pyrrhotite, pyrite. Gangue: Dolomite, calcite. Deposit: Replaced and mineralized fracture zone in limestone is 2 to 20 ft. wide and has been traced for 600 ft. on the surface near granite contact. Dev: 135-ft. adit, a smaller adit, 150 ft. of shaft work, an open pit, 2 diamond drill holes. Assays: One diamond drill hole showed a 20-ft. intersection av. 5% Zn. General grade reported to be 2.5% Pb, Zn. Ore contains traces of gallium and germanium. Prod: Small amounts 1937, 1947-1951. Ref: 30, p. 102. 97, 1938, p. 460. 133, p. 33. 136. 158.

**Flannigan**

(see Iroquois)

**Flat Creek (11)**

Loc: Sec. 4, (39-38E), on Flat Cr. Elev: 2,830 ft. Access: 19 mi. by road to railroad at Northport. Prop: 3 unpatented claims. Owner: Claude Sanders, Northport, Wash., leasing from Otto Ehrendreich, Northport, Wash. (1939-1950). Ore: Zinc, lead. Ore min: Sphalerite, galena. Deposit: Narrow veins and related small replacement bodies in impure quartzite along fractures. Ore minerals are bunched and sparse as exposed in 1950. Dev: 8-ft. pit, several trenches. Ref: 157.

**Frisco Standard (67)**

(see under silver)

**Galena Hill (6)**

(see under lead)

**Gillete**

(see Avondale-Dome under lead)

**Gladstone (47)**

(see under lead)

**Globe (8)**

(see under copper)

**Gold Bar (73)**

(see under gold)

**Gorien Zinc**

(see Black Rock, Deep Creek, New England)

Note: In 1919 John Gorien was Treasurer of the Northport Mining Co., and this company owned or controlled 280 acres of mineral land on both sides of Deep Cr. Valley, probably including all of the properties described separately in this report under the names of Deep Creek (Northport, Gorien), New England (Stone), Black Rock (Washington Black Rock, Gorien Zinc), and probably including others also.

**Great Republic (15)**

(see under copper)

**Great Western (33)**

(see under lead)

**Grubstake**

(see under silver)

**H & B**

(see Aichan Bee under silver)

**Hartbauer (54)**

(see under lead)

**Hartford**

(see Krug under copper)

150 ft.  
along  
and ore  
thickness  
howed

Elev:  
g Co.,  
haler-  
inated  
horite.  
: 5-ft.  
% Zn.

the W.  
o rail-  
Gold-  
—).  
(1943).  
silver.  
e and  
d zone  
Lead

**Hecla (109)**

(see under copper)

**Helena Johnson (37)**

(see under lead)

**Heritage (25)**

**Loc:** Near center sec. 9, (39-39E), Northport dist. **Owner:** Wm. Heritage (1952). **Ore:** Zinc, tungsten. **Ore min:** Sphalerite, scheelite. **Deposit:** Sphalerite sparsely scattered in limestone. **Dev:** Open cuts, shaft. **Ref:** 158.

**Hi Cliff**

(see Uncle Sam under lead)

**Highland (63)**

(see under lead)

**Hoodoo (122)**

(see under silver)

**Hubbard (23)**

(see under lead)

**Hunter**

(see Jackson)

**Indian**

(see Eureka under gold)

**Iron Mask (Treadwell) (3)**

**Loc:** Sec. 25, (40-36E), just E. of the Mystery property. **Access:** Road. **Prop:** 2 unpatented claims. **Owner:** Andrew Abrahamson and Joe Bodbout, Orient, Wash. (1941). **Ore:** Zinc, lead, silver, gold, copper. **Ore min:** Pyrite, pyrrhotite, chalcopryrite. **Deposit:** Quartz vein said to av. 4 to 6 ft. in width and to be traceable for 3,000 ft. occurs in latite and limestone cut by granite dike. **Dev:** 100 ft. of work in 3 shafts, some open cuts. **Assays:** A selected sample assayed 28% Zn, 14% Pb, 7 oz. Ag. 0.08 oz. Au. **Ref:** 30, pp. 127-128. 164, p. 282.

**Iroquois (Flannigan, Columbia) (57)**

**Loc:** Secs. 19, 20, 29, and 30, (40-42E), just E. of Red Top Mtn., Northport dist. **Elev:** 2,600 ft. **Access:** 4 mi. road to Leadpoint. 12 mi. to railroad at Boundary. **Prop:** 17 unpatented claims and 40 acres deeded land. **Owner:** Mines Management, Inc., Spokane, Wash. (1948—). Iroquois Mining Co. (1918-1924). Willow Creek Mines, Inc. (1945). **Ore:** Zinc, lead, silver, gold. **Ore min:** Galena, sphalerite, pyrite, chalcopryrite, cerussite, smithsonite. **Deposit:** Ore occurs as replacements in a breccia zone 50 to 60 ft. wide in limestone 280 ft. from contact with argillite. Altered lamprophyre dikes are associated with the ore. **Dev:** 800-ft. crosscut, 5,089 ft. of diamond drill holes, several old workings, and a large glory hole. 1,900 ft. of drifts and a 351-ft. raise. **Improv:** New 20- by 48-ft. metal building (1949). **Assays:** Owner reported 640,000 tons of indicated ore in 1950 had an indicated av. of 3.02% Zn, 0.88% Pb. **Prod:** 1917, 1928, 2,898 tons in 1950 av. 3.3% Zn, 0.39% Pb, 0.1 lb. Cd, 0.025 oz. Ag per ton. **Ref:** 30, p. 108. 46, pp. 85-86. 73, pp. 102-104. 97, 1917, p. 506; 1928, p. 703. 98, 1920-1925. 108, 4/50. 110, 1/49, pp. 5-6. 112, p. 185. 133, p. 37. 158. 164, pp. 296-297.

**Jackson (Hunter) (60)**

**Loc:** SW¼NW¼ sec. 19, (40-42E), on W. side of Red Top Mtn., Northport dist. **Access:** 2 mi. from road. **Prop:** 1 unpatented claim. **Owner:** W. F. Stevens (1941). White City Silver Mines Co. (1928-1935). **Ore:** Zinc, silver, lead, copper. **Ore min:** Pyrite, chalcopryrite, sphalerite, galena. **Deposit:** Mineralized quartz vein in argillite 4 to 6 ft. in width. **Dev:** 350-ft. adit with 100-ft. raise, 3 upper adits, each about 175 ft. long. **Prod:** 1928, 1935. **Ref:** 30, p. 108. 97, 1928, p. 703; 1935, p. 355. 106, 9/17/28, p. 24. 158.

**Jay Dee (107)**

(see under silver)

**Jay Gould (110)**

(see under silver)

**Joe Creek (95)**

**Loc:** NW¼NW¼ sec. 4 and SW¼SW¼ sec. 5, (36-40E), Mill Cr. area. **Owner:** Joe Creek Mining Co., Colville, Wash. (1952—). **Ore:** Zinc, lead. **Ref:** 133, p. 35.

**Jupiter**

(see Last Chance under lead)

**Just Time (62)**

(see under lead)

**Keough (64)**

(see under lead)

**Kettle River**

(see Galena Hill under lead)

**King Tut**

(see under lead)

**Krug (113)**

(see under copper)

**Lakeview**

(see Roosevelt under silver)

**Last Chance (34)**

(see under lead)

**Lead King (48)**

(see under lead)

**Little Frank (120)**

(see under lead)

**Lone Star (20)**

(see under silver)

**Longshot (94)**

(see under lead)

**Lucile (Owen, Boundary Silver Lead) (58)**

**Loc:** Near center S. line SW¼ sec. 19, (40-42E), on Red Top Mtn., Northport dist. **Elev:** 3,550 ft. **Access:** 9 mi. by road to railroad at Boundary. **Prop:** 7 claims: Tip Top, Winner, Cabin, Lucile, Comet, Silver Tip, Effie. **Owner:** 20-yr. lease (1952-1972) by Pacific Northwest Mining Co., Bremerton, Wash., from Consolidated Speculator Corp., Spokane, Wash. (1948—). E. C. Owen (1910-1943). Leased to Boundary Silver Lead Co. (1926). **Ore:** Zinc, lead, silver, cadmium. **Ore min:** Galena, tetrahedrite, sphalerite, pyrite, scheelite, cerussite. **Gangue:** Quartz, calcite. **Deposit:** Irregular mineralized zones in marble associated with quartz veins and lamprophyre dikes. Ore body developed in 1948, 8 to 25 ft. wide est. to contain 11,000 tons of ore. The best showing of scheelite is in quartz stringers associated with the sulfides in a zone exposed for 50 ft. in a short drift at end of the 212-ft. adit. **Dev:** 212-ft. adit, from which several winzes and drifts have been driven. Another adit 75 ft. lower is 430 ft. long (1953). **Improv:** New ore bins, compressor house, cabin (1949). **Assays:** Zn concentrates reportedly high enough in Cd to pay freight and smelter charges. Weighted av. of 12 samples 1.5 to 8.0 ft. wide was 2.34% Pb, 8.7% Zn, 1.36 oz. Ag. 50 tons produced in 1926 contained 11% Zn, 19% to 32% Pb. Ore contains a trace of gallium. **Prod:** 50 tons 1926, 160 tons 1948, 44 tons 1949. **Ref:** 30, pp. 89-90. 37, pp. 61-62. 46, pp. 66-68. 73, pp. 100-102. 97, 1928, p. 703. 106, 9/17/28, p. 24. 110, 2/49, p. 3. 150, p. 30. 157. 158. 164, pp. 298-299.

**Lucky Charlie (5)**

(see under copper)

**Pioneer**

(see Longshot under lead)

**Plug (41)**

Loc: Secs. 28 and 33, (39-41E), just W. of Farmer property. Access: 14 mi. by road from railroad at Northport. Prop: 160 acres of deeded land. Owner: Grandview Mines, Inc., Spokane, Wash. (1952—). Mrs. Helen Johnson, Northport, Wash. (1941-1945). Ore: Zinc, lead, silver. Deposit: Replacement zone in limestone near granite contact is about 12 ft. wide and has been traced on the surface for 1,000 ft. Dev: 15-ft. shaft, 130-ft. adit. Assays: Said to contain as much as 22% Zn, 2% Pb. Samples from unspecified widths show 0.1% to 0.2% Pb, 0.3% to 8.9% Zn. Ref: 30, p. 90. 46, p. 62. 157. 158.

**Pomeroy (10)**

Loc: SE¼ sec. 22, (40-37E), 1,500 ft. S. of Easter Sunday property, Orient dist. Elev: 3,550 ft. Access: 8 mi. E. of Rockcut on Easter Sunday Lk. Road. Prop: 2 unpatented claims: Copper Mask, Copper Glance. Owner: W. M. Hendrickson, Orient, Wash. (1949). Sulphide Mountain Mining & Milling Co. (1907-1918). R. Normberg, Orient, Wash. (1941). Ore: Zinc, lead, copper, antimony, silver, gold. Ore min: Mostly sphalerite, some pyrite, galena, chalcopryrite, boulangerite, bornite. Deposit: Quartz vein as much as 8 ft. wide in schistose diabase or related rock. Dev: Vertical shaft 220 ft. deep, 27-ft. shaft. Assays: Said to carry Ag. Ref: 7, p. 83. 30, p. 127. 33, 1907, p. 1056; 1908, p. 1279. 98, 1918, p. 137. 132, pp. 143-144. 164, pp. 278-279.

**Providence (22)**

(see under lead)

**Providence (Deer Trail)**

(see Deer Trail under silver)

**Queen (124)**

(see under silver)

**Queen and Seal**

(see Queen under silver)

**Ranch View (59)**

(see under lead)

**Red Sheaf (75)**

(see under gold)

**Red Top (53)**

(see under lead)

**Redwood**

(see Eagle under silver)

**Rinchaw**

(see Middleport)

**Riverview (16)**

(see under lead)

**Robena**

(see Young America)

**Rockcut (4)**

(see under lead)

**Rocky Creek**

(see Burrus)

**Roosevelt (61)**

(see under silver)

**Royal**

(see Big Chief under lead)

**Royal Gold**

(see Hubbard under lead)

**Santa Rita**

(see Cleveland under lead)

**Saturday Night-Sunday Morning (125)**

(see under lead)

**Scandia (39)**

Loc: NE¼ sec. 23, (39-40E), on W. side of Deep Cr. Elev: 2,469 ft., 600 ft. above Deep Cr. Access: 6 mi. by road from railroad at Northport. Prop: 5 claims: Scandia, Galena, Queen, Sunnyside, Triangle; and 70 acres of deeded land. Owner: John, Donald, Theodore, and Effie Nasburg and Raleigh Hallenius, Spokane, Wash. (1943—). Ore: Zinc, lead, silver, gold. Ore min: Sphalerite, a little galena. Gangue: Calcite. Deposit: Mineralized breccia zone in dolomite near slate contact. Evidence of mineralization over lateral distance of about 400 ft. Dev: 20-ft. shaft, 240-ft. drift, 100-ft. winze (1953). Assays: Several samples show from 5.74% to 39.19% Zn, 3.3% to 15.0% Pb, 0.6 to 1.0 oz. Ag, tr. Au. Ore in 100-ft winze runs 2% to 22% Zn (1953). One carload of ore in 1950 contained 8% Pb, 8.6% Zn. Prod: 1950, 1951. Ref: 133, p. 38. 157. 158.

**Seal**

(see Queen under silver)

**Shoemaker (97)**

Loc: SE¼ sec. 8, (36-40E), NE. of Colville. Access: About 10 mi. by road from railroad at Colville. Prop: 6 unpatented claims. Owner: Daroy Metals, Inc. (1944—). Ore: Zinc, silver. Ore min: Sphalerite, galena, pyrite. Deposit: 6-ft. mineralized zone underlying low-dipping thrust fault in brecciated dolomite. Ore minerals show only in the upper adit. Dev: 1,200 ft. of workings in 2 adits, 3 raises, 3 stopes, and numerous open cuts. Assays: 81 tons av. \$14 per ton. Ore remaining in sight in 1953 est. to av. 4% sphalerite. Prod: 1926; 81 tons shipped to Wallace, Idaho in 1941. Ref: 30, p. 52. 46, p. 48. 68, p. 8. 97, 1926, p. 469. 157. 158.

**Short Wait (26)**

(see under lead)

**Sierra Zinc (Aladdin, Blue Ridge) (87)**

Loc: Secs. 19, 20, 29, and 30, (38-41E), on W. side of Deep Cr. 4 mi. N. of Aladdin. Elev: 2,000 ft. Access: ½ mi. W. of the Aladdin-Deep Lk. highway by road. 17 mi. from railroad at Northport. Prop: 7 claims: Troublesome, Mistake, In Place, Original (or Skookum), Rite, Champion, Protect. Owner: Goldfield Consolidated Mines Co., San Francisco, Calif. (1949—). Aladdin Mining Co. (1908-1933). Blue Ridge Mining Co. (1910-1940). Sierra Zinc Co. (1940-1944). Ore: Zinc, lead, silver, gold. Ore min: Sphalerite, galena, chalcopryrite, pyrite, molybdenite, smithsonite. Gangue: Dolomite, limestone. Deposit: Present ore consists of sphalerite and galena disseminated in limestone. Also on the property are quartz veins which carry minor amounts of chalcopryrite, sphalerite, galena, pyrite, and molybdenite. The main ore body mined prior to 1944 measured 300 ft. along the strike, 200 ft. down dip, and 4 to 12 ft. thick. 3 smaller ore bodies were mined. The ore occurred in marble close to a low-dipping fault and/or an igneous sill. Dev: 6 adits total 8,450 ft. of workings and 470 ft. of shaft. Diamond drill holes. Principal workings are on 4 levels. The upper 2 levels are connected to the lower 2 by a 260-ft. 30° inclined shaft. Improv: 300-ton flotation mill (1954). Assays: A carload of conc. ran 6.7 oz. Ag, 0.14 oz. Au, 21.9% Zn, 11% Pb. 12,123 tons produced in 1942 av. 1.59% Pb, 7.36% Zn. Av. of 0.87% Pb, 5.43% Zn, 0.491 oz. Ag, 0.012 oz. Au per ton were recovered from 1941-1944 production. Prod: 1909, 1924, 1925. 1941-1944 (100,000 tons), 1950-1952. Ref: 30, pp. 109-110. 46, pp. 40-42. 63, p. 111. 73, pp. 109-111. 97, 1925, p. 561; 1926, p. 470. 98, 1922-1926. 106, 1/5/33. 108, 1/42.

p. 40; 3/43, pp. 23-25. 112, p. 164. 116. *ibid.* 2. 1908, p. 26. 133, p. 34. 158.

**Silver Basin**

(see Queen under silver)

**Silver Crown (29)**

(see under lead)

**Silver Key**

(see Big Chief under lead)

**Silver Mountain**

(see Daisy-Tempest under silver)

**Silver Queen (Ark)**

(see Ark under silver)

**Silver Queen (Queen)**

(see Queen under silver)

**Silver Seal**

(see Queen under silver)

**Silver Trail (84)**

(see under lead)

**Smoky Bullion**

(see A and C under copper)

**Star**

(see Just Time under lead)

**Sterrett (18)**

(see under lead)

**Stockwell**

(see Columbia Tungsten under tungsten)

**Stone**

(see New England)

**Stonewall-Sunnyside (30)**

(see under lead)

**Sugar Loaf**

(see Vanasse under silver)

**Sunday Morning**

(see Saturday Night-Sunday Morning under lead)

**Sunnyside**

(see Stonewall-Sunnyside under lead)

**Sunset (17)**

(see under lead)

**Surprise**

(see Uncle Sam under lead)

**Tempest (103)**

(see under silver)

**Tenderfoot (Avondale-Dome)**

(see Avondale-Dome under lead)

**Tenderfoot (Big Chief)**

(see Big Chief under lead)

**Treadwell**

(see Iron Mask)

**Uncle Sam (82)**

(see under lead)

**United Treasure (65)**

(see under silver)

**Van Stone (85)**

Loc: Pit: E½ sec. 33, (38-40E). Mill: SE¼ sec. 28, (38-40E), on headwaters of Onion Cr. Elev: 3,600 ft. at mill. Access: 11 mi. by road to railroad at Marble. Prop: 16 patented claims,

deeded land. Owner: American Smelting & Refining Co., Salt Lake City, Utah (1950—). Geo. Van Stone and Harry Maylor (1920-1926). Hecla Mining Co. (1926-1927). Van Stone Mining Co. (1930). Willow Creek Mines of Nevada, Inc. (1939-1950). Ore: Zinc, lead. Ore min: Sphalerite, galena, pyrrhotite, pyrite. Gangue: Jasperoid, tremolite. Deposit: Bedding replacement of dolomite in Metaline limestone well below top of the formation. Two ore bodies have been developed by diamond drilling, one of which is exposed in an open pit. The pit will ultimately be about 1,400 ft. long and 400 ft. wide. The S. ore body is one-fourth as large. The ore bodies are 400 to 1,600 ft. from granite contact. Mineralized zones are lensy. Dev: 40-ft. shaft, 200-ft. adit, 600-ft. adit, diamond drill holes. Production is from open pit. Improv: Camp buildings, 1,000-ton mill, and accessory buildings (1955). Assays: A shipment after removal of some zinc by hand-sorting gave 42% Pb, 8% Zn, 4.2 oz. Ag, 0.005 oz. Au. Comparatively large tonnage of ore indicated by drilling av. 1.15% Pb, 5.54% Zn. Mining ore expected to av. 4.0% combined Pb, Zn. Prod: 1930, 1937, 1942, 1952-1955. Ref: 30, pp. 110-111. 43, 4/53, pp. 72-76. 46, p. 65. 97, 1930, p. 676; 1938, p. 460; 1943. 106, 3/5/31, p. 19. 108, 4/53, pp. 26-31, 68-69. 133, p. 29. 158.

**Vanasse (74)**

(see under silver)

**Venus**

(see Deer Trail under silver)

**Victory**

(see Vanasse under silver)

**Wall Street (27)**

(see under copper)

**Washington Black Rock**

(see Black Rock)

**Wells Fargo (116)**

(see under antimony)

**White Horse (13)**

(see under copper)

**Winslow (105)**

(see under lead)

**Young (43)**

(see under lead)

**Young America (Robena) (71)**

Loc: SW¼ sec. 28 and NE¼NW¼ sec. 33, (38-38E), about 500 ft. above Roosevelt Lk., Northport dist. Elev: 1,600 to 1,700 ft. Access: ¼ mi. NE. of Bossburg by road. Prop: 4 unpatented claims: Comet Silver, Mt. Vernon, Potomac, Silver Star. Owner: E. B. Gibbs and I. M. Hunley, Colville, Wash., operators (1951—). Optioned by Young America Mines, Inc., Seattle, Wash. (1951—), from Walter Morris and Perry Leighton, Colville, Wash. Young America Cliff Consolidated Mining Co. (1897-1905). Robena Silver Lead Co. (1907-1915). Bossburg-Yakima Co. (1923). Young America Mining Co. (1924-1930). Cuprite Mining Co. (1924-1943). Ore: Zinc, lead, silver, gold, copper. Ore min: Sphalerite, galena, pyrite, smithsonite, geocronite, cerussite, cervantite, stannite. Gangue: Quartz, calcite, siderite. Deposit: Irregular stringers and lenses of high-grade ore and disseminated ore in dolomite. One low-grade disseminated deposit occupies a zone 30 to 150 ft. wide and has been traced by diamond drilling for 900 ft. in length. Dev: 6 adits with considerable stoping between them total about 1,500 ft. Improv: 60-ton flotation mill (1952). Assays: Shipping ore av. 7% Pb, 7.7% Zn, 16.1 oz. Ag. Conc. from ore from one stope showed 3% Sb. A sample of geocronite showed 0.02% Sn, 58 oz. Ag. Pb:Zn ratio av. 1:2. One 5-ft. face shows